



Explaining Variation in Takeover: Defenses Blame the Lawyers

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Explaining Variation in Takeover Defenses: Blame the Lawyers

John C. Coates IV[†]

Traditional law and economics scholarship predicts that no companies will adopt takeover defenses prior to IPOs, because defenses increase agency costs between shareholders and managers, and reduce IPO proceeds. In fact, data from 357 IPOs in the 1990s show that many companies adopt defenses prior to IPOs. Even more puzzling for conventional scholarship, defenses vary widely at the IPO stage. Analysis shows that more of this variation in defenses can be explained by characteristics of law firms advising owner-managers than by traditional theories about defenses. Among other findings: (1) Companies advised by larger law firms with more takeover experience adopt more defenses; (2) In 1991-92, companies with Silicon Valley lawyers adopted almost no defenses; by 1998, Silicon Valley lawyers' clients were as likely to use defenses as clients of other lawyers; (3) Companies with high-quality underwriters and venture capital backing adopt more defenses; (4) The overall rate of defense adoption increased in the 1990s. Together, these findings provide strong evidence that lawyers determine key terms in the "corporate contract," due to agency costs between owner-managers and their lawyers.

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INTRODUCTION:
TAKEOVER DEFENSES AT THE IPO STAGE

In 1994, IBM made a \$3.3 billion hostile takeover bid for Lotus.¹ Despite a determination to remain independent, management of Lotus capitulated within a week of IBM's bid.² At roughly the same time, Moore Co. made a \$1.3 billion hostile bid for Wallace Computer.³ After thirteen months of bitter battle, Moore Co. dropped its bid, leaving Wallace independent.⁴ What accounts for these strikingly different bid outcomes? Hostile takeover defenses do,⁵ defenses chosen by the targets years before, prior to the moment they became public companies. Defenses have become difficult if not impossible to adopt once a company's shares are sold to the public.⁶ Choice of governance structure at the initial public offering ("IPO") stage, in other words, turns out to have a large effect on whether target companies can remain independent in the face of a hostile bid. Systematic analysis of hostile bids bears out the contrast between the Lotus and Wallace bids: targets (such as Wallace) with one type of defense, classified boards, were in the 1990s three times more likely to remain independent than targets (such as Lotus) that lacked classified boards.⁷

Understanding that takeover defenses determine bid outcomes, however, only pushes the inquiry back one step: what determines whether firms adopt takeover defenses, and in particular why do defenses vary at the IPO stage?⁸ If, on the one hand, defenses reduce firm value (by

1. Laurence Zuckerman, *I.B.M.'s Big Move: The Bidder; I.B.M. Seeks To Buy Software Maker In \$3.3 Billion Bid*, N.Y. TIMES, June 6, 1995, at A1.

2. See International Business Machines Corp. Schedule 14D-1 (June 6, 1995) (on file with author) (launching IBM bid on June 6); *Id.* at 23 (describing background to IBM bid, noting that on March 17, 1995, Lotus CEO Jim Manzi "said [to IBM representatives] he did not want to discuss an acquisition by IBM of [Lotus]"; Lotus Development Corp. / IBM Corp. Joint Press Release (June 11, 1995) (on file with author) (announcing agreement between IBM and Lotus on friendly merger).

3. Nicolaas Van Rijn, *Moore Bids \$ 1.3 Billion in Hostile Takeover of Firm*, THE TORONTO STAR, July 31, 1995, at E6.

4. *Moore Drops Bid for Wallace*, CHICAGO SUN-TIMES, August 7, 1996, at 65.

5. Compare *Moore Drops Bid for Wallace*, *supra* note 4, at 65 (attributing failed bid to "slew of antitakeover defenses") with Kate Bohner Lewis, *The Lotus Position*, THE INFORMER, July 17, 1995, at 18 (attributing appeal of IBM bid for Lotus to arbitrageurs to fact that Lotus had "basically no defenses" and was thus likely to succeed).

6. See *infra* note 23.

7. This estimate is based on a sample of fifty-two hostile bids from 1997 to 1999 analyzed and discussed in a separate working paper, John C. Coates IV & Guhan Subramanian, *Do Takeover Defenses Matter? Evidence on Bid Outcomes and Bid Deterrence from the 1990s M&A Marketplace* (Jan. 7, 2001) (on file with author).

8. This Article confirms recent research showing that takeover defenses vary prior to IPOs. See Robert Daines & Michael Klausner, *Do IPO Charters Maximize Firm Value? Antitakeover Provisions in IPOs*, 17 J.L. ECON. & ORG. 83, 96 (2001); Laura Casares Field, *Control Considerations of Newly Public Firms: The Implementation of Antitakeover Provisions and Dual Class Shares Before the IPO*, Working Paper, at 35-36 tbl.4 (Feb. 10, 1999), available at <http://www.ssrn.com>; Laura Casares Field & Jonathan M. Karpoff, *Takeover Defenses at IPO Firms* (Oct. 27, 1999) (Working Paper, on file with

increasing agency costs between shareholders and managers), as Easterbrook and Fischel⁹ argued, then why do half of companies adopt substantial defenses prior to IPOs (as shown in Part IV)? If, on the other hand, defenses have largely positive effects on firm value (by increasing bargaining power or overcoming some market failure),¹⁰ why do only half of companies adopt defenses prior to IPOs? The challenge, in other words, is not simply to explain the presence of defenses at the IPO stage, but to explain the variation in defense adoption.¹¹

In this Article, I present evidence from two large samples of IPOs that suggests that takeover defenses are chosen at the IPO stage primarily based on the takeover experience of the corporate lawyers working for the company at the time of the IPO. The characteristics of the lawyers working on the IPO were more predictive of defenses being adopted (or not adopted) than were testable company characteristics, such as a company's size, location, or industry. Lawyers, in other words, represent largely autonomous actors making decisions for corporate clients and determining corporate control structures, which in turn have large effects on hostile bid outcomes years later. Corporate lawyers, at least at the IPO stage, appear to be working relatively free of market, ethical, or other constraints, and many appear to be making choices, and mistakes, without determining whether such choices are in the long-term interests of their clients (that is, pre-IPO owner-managers).

Put more formally, this Article explains variation in takeover defenses at the IPO stage, hypothesizing that the quality of legal services provided to entrepreneurs and other pre-IPO shareholder-managers varies significantly, depending on the experience, size, and location of law firms serving as company counsel at the time of an IPO ("law firm hypotheses"). In competition with the claims advanced in this Article are two categories of explanations for the IPO defense puzzle. First, one might maintain that investment banker advice about the effect of defenses on IPO prices varies in quality, and it is this variation that explains why companies adopt different defenses ("banker hypotheses"). Second, the efficiency of defenses may vary with company or pre-IPO shareholder characteristics, so that defenses

author); Tatiana Lapushchik, *Antitakeover Provisions at the IPO Stage: Empirical Evidence on the Mutual Preferences* (Mar. 10, 2000) (unpublished manuscript, on file with author).

9. Frank Easterbrook & Daniel Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161 (1981).

10. See Martin Lipton, *Takeovers Bids in the Target's Boardroom*, 35 BUS. LAW. 101, 120-24 (1979).

11. As Daines & Klausner themselves acknowledge, *supra* note 8, at 86, 111, their effort to explain the IPO defense puzzle produced not answers but more empirical puzzles: they find defenses correlate positively with industry-level research and development and negatively with industry-level takeover activity in the mid-1990s. As discussed in Parts III and IV, both findings are contrary to prior theory on how the efficiency of defenses might vary among companies.

are optimal at some companies, but not others ("variable efficiency hypotheses").

This Article describes the law firm hypotheses, analyzes empirical implications of the competing theories, and empirically tests each theory, to the extent feasible, as an alternative to the law firm hypotheses. Data from a sizeable sample ($n=162$) of IPOs from 1991-92, and a second large sample from 1998-99 ($n=195$), are used to test explanations for the IPO defense puzzle. Firm charters, bylaws, and prospectuses are reviewed, and summary data on the number, type, and strength of defenses are presented. These data are regressed against data on law firms to test the law firm hypotheses, and against data on underwriters to test the banker hypotheses. Also included in the regressions are variables that proxy for different variable efficiency hypotheses (specifically, agency costs, bargaining power, market myopia, and private benefits of control).

The empirical analysis produces three striking results. First, strong evidence is found that key terms in the "corporate contract," a company's suite of pre-IPO defenses, are determined by lawyers. The takeover experience, size, and location of law firms strongly correlate with the number and strength of pre-IPO takeover defenses adopted by companies they advise.¹² Companies advised by larger law firms with more takeover experience adopt more defenses. In 1991-92, companies advised by lawyers located in Silicon Valley adopted fewer defenses, but by 1998, Silicon Valley law firms were just as likely to recommend defenses as law firms elsewhere.

Second, companies represented by high-quality underwriters or with venture capital backing are more likely to adopt defenses, and the rate of defense adoption increased during the 1990s. While open to interpretation, these findings are more consistent with theories that hold it is generally optimal¹³ for pre-IPO owner-managers to adopt defenses than conventional agency-cost theories that hold it is uniformly a bad idea for defenses to be adopted.¹⁴ These correlations are important because underwriters, and to a

12. In theory, causation could run the other way; that is, clients that desire defenses choose lawyers with M&A experience. In reality, however, few companies switch law firms in anticipation of IPOs, and thus client choice of lawyer is not a plausible cause of the correlation between lawyer characteristics and defenses. See *infra* Part II.D.

13. The Article is wholly agnostic on whether defenses are socially efficient and only offers reasons to think that defenses are privately optimal for pre-IPO owner-managers. See Conclusion, *infra* (discussing normative implications of findings).

14. Defenses could be generally optimal for pre-IPO owner-managers if defenses provide benefits (such as increased bargaining power) that are generally greater than their costs (such as increased agency costs). See *infra* Part III (discussing theories of the costs and benefits of defenses). Alternatively, defenses could be generally optimal for pre-IPO owner-managers if IPO pricing is so poor that adoption of defenses does not result in a lower IPO price, so that defenses would allow pre-IPO owner-managers to retain more control over their companies "for free" (the cost being borne by IPO investors). That IPO pricing may be generally poor is suggested by studies showing first-day "underpricing" and long-run "overpricing." E.g., Jay R. Ritter, *The Long-Run Performance of Initial Public Offerings*, 46 J. FIN. 1 (1991); Tim Loughran & Jay R. Ritter, *The New Issues Puzzle*, 50 J. FIN.

lesser extent venture capitalists ("VCs"), are critical sources of information for pre-IPO owner-managers about the IPO prices, and in all prior writing about defenses, scholars have reasoned that if defenses are bad for pre-IPO owner-managers, it must be because defenses reduce IPO prices.¹⁵ Yet the correlations between defenses and underwriter reputation, and between defenses and VC-backing, both suggest that if defenses reduce IPO prices, pre-IPO owner-managers know about the effect on prices and are choosing to adopt defenses anyway. The evidence thus suggests that defenses are "worth it," and (combined with evidence showing that defenses have increased in the 1990s) that defenses are generally good for pre-IPO owner-managers.

Third, consistent with evidence from Field,¹⁶ some evidence suggests that the most extreme form of takeover defense (dual class capital structures) are distinct from other defenses and are motivated by high, primarily psychic (that is, non-pecuniary) private benefits of control. Little evidence is found to support variable efficiency hypotheses for defense adoption. Together, these findings suggest that variation in defenses is explained by lawyer choices that have little to do with the interest of their pre-IPO owner-manager clients.

The Article proceeds as follows. Part I provides a brief overview of takeover defenses and their importance to corporate control. Part II proposes a theory in which the characteristics of the lawyer-client relationship provide lawyers with sufficient autonomy that they determine their clients' pre-IPO defenses, largely unconstrained by market forces or ethical rules. Part III reviews traditional "company-level" theories about how defenses might be good or bad for companies and their shareholders. These theories provide the basis for the variable efficiency hypotheses used as alternatives to the lawyer and banker hypotheses. Part IV sets up an empirical test for the competing theories, describes the samples and methodology, and presents empirical findings. Part V presents interpretations of the data, and the Article concludes with a brief discussion of the implications of the Article's empirical findings.

23 (1995). Poor IPO pricing across-the-board does not explain variation in defenses at the IPO stage, however, for it would mean defenses are privately optimal for all owner-managers to adopt, and no theories predict IPO pricing would be particularly bad for companies adopting defenses.

15. *E.g.*, Daines & Klausner, *supra* note 8; Field, *supra* note 8; Easterbrook & Fischel, *supra* note 9.

16. Field, *supra* note 8, at 26.

I

BRIEF OVERVIEW OF TAKEOVER DEFENSES

The impetus for the development of modern takeover defenses¹⁷ was the emergence of the hostile tender offer.¹⁸ Hostile tender offers allowed anyone with the financing to gain rapid control of the largest businesses in the world by publicly committing to pay a significant premium over the target's stock market price. After emerging in the 1950s,¹⁹ the hostile tender offer enjoyed a stunning rise in importance after Morgan Stanley, which like other well-known, "white-shoe" investment banks had traditionally declined to work on hostile bids, broke ranks in 1974 to advise on a hostile bid for International Nickel.²⁰ By the early 1980s, most U.S. public companies were vulnerable to hostile bids, and takeover defenses were developed to mitigate that threat. Through the mid-1980s, companies adopted a number of takeover defenses in the form of charter amendments. In retrospect, the most significant of these was the staggered or classified board, which (if properly implemented) imposes a year delay on efforts by shareholders to take control of a target's board.²¹

But charter amendments require shareholder approval,²² which has not generally been forthcoming for defenses since institutional shareholders organized in the late 1980s. Not surprisingly, shareholders have been unwilling to approve defenses once a high-premium offer has been put on the table, as after IBM's 85% premium bid for Lotus, since defenses may enable target managers to defeat the bid and deprive shareholders of the bid premium. But even when a bid is not on the table, shareholders have been

17. A note on terminology: Two types of defenses may be distinguished: (1) transactional defenses, which are financial or operational transactions anticipating or reacting to a bid and designed to make a takeover more difficult, by raising a firm's share price, paying off the bidder, or reducing a bidder's profit; and (2) structural defenses, which are legal mechanisms, often adopted in advance of a bid, designed to deter or impede bids without having a financial or operational effect on the target. This Article focuses on structural defenses, but for brevity refers to "defenses" as shorthand.

18. See DOUGLAS AUSTIN & JAY FISHMAN, CORPORATIONS IN CONFLICT 7-23 (1970) (documenting rise of hostile tender offer 1956-67); Gerald Davis & Suzanne Stout, *Organization Theory and the Market for Corporate Control: A Dynamic Analysis of the Characteristics of Large Takeover Targets 1980-90*, 37 ADMIN. SCI. Q. 605, 608 (1992) (documenting rapid increase in hostile bids in 1980s).

19. See AUSTIN & FISHMAN, *supra* note 18.

20. See BRUCE WASSERSTEIN, BIG DEAL: THE BATTLE FOR CONTROL OF AMERICA'S LEADING CORPORATIONS 470 (1998) (describing internal debate at Morgan Stanley over decision to represent a hostile bidder, as no other high-quality Wall Street investment bank had previously done).

21. Companies with classified boards (also known as staggered boards) elect a portion (usually one-third) of their directors each year, with directors serving multiyear (usually three-year) terms. See DEL. CODE ANN. tit. 8, § 141 (1991) (authorizing classified boards with two or three classes having two- or three-year terms); see generally Richard H. Koppes et al., *Corporate Governance Out Of Focus: The Debate Over Classified Boards*, 54 BUS. LAW. 1023 (1999) (discussing classified boards). For evidence regarding the importance of classified boards, see Coates & Subramanian, *supra* note 7.

22. E.g., DEL. CODE ANN. tit. 8, § 242 (1991 & Supp. 1998).

unwilling to approve defenses.²³ The one significant defense²⁴ that can still be adopted “midstream” (that is, after ownership is dispersed following an IPO) is the poison pill,²⁵ which does not require shareholder approval.²⁶ But the pill can be eliminated via proxy fight, and for a large percentage of public companies with poison pills, proxy fights take little longer than tender offers.²⁷ Despite adoption of pills by 60% of the S&P 1500, there were almost seventy hostile bids in 1995, nearly as many as the peak of the takeover boom of the 1980s, and over forty hostile bids were launched in 2000.²⁸

23. See John C. Coates IV, *Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence*, 79 TEX. L. REV. 271, 323-25 & n.209 (2000) [hereinafter Coates, *Critique*] (presenting evidence that midstream defenses are not approved by shareholders in 1990s); Gerald F. Davis & Tracy A. Thompson, *A Social Movement Perspective on Corporate Control*, 39 ADMIN. SCI. Q. 141 (1994) (documenting organization of institutional investor community opposition to defenses in late 1980s).

24. Modest defenses can be adopted by bylaw amendment, but such amendments can be “undone” by shareholder action. See DEL. CODE ANN. § 109 (1991) (permitting bylaw amendments by shareholders).

25. A standard poison pill is adopted when a board declares and pays a dividend consisting of rights to purchase additional stock from the company. The rights are governed by a “rights plan,” and a rights agent is appointed to act (in theory) for rights holders in respect of their rights, much as an indenture trustee would act for bondholders under an indenture. If specified events occur (such as a hostile acquisition of more than a specified amount of a company’s stock), the pill is “triggered,” and the rights allow holders (other than a hostile bidder) to purchase stock at a discounted price. The primary practical effect of a pill is to deter hostile stock acquisitions through tender offer or otherwise. See Wachtell Lipton Rosen & Katz, *The Share Purchase Rights Plan*, reprinted in RONALD J. GILSON & BERNARD S. BLACK, *THE LAW AND FINANCE OF CORPORATE ACQUISITIONS* 4-12 (2d ed. 1998 Supp.) (setting forth terms of standard poison pill).

26. *Id.* At some companies, proxy fights can take six to eighteen months or more depending on state law and companies’ specific defenses. These defenses include terms governing whether shareholders can act by written consent, call special meetings, remove directors without cause, expand the size of the board, or fill vacant board seats, as set forth in Appendix B. See also John C. Coates IV, *Measuring the Domain of Mediating Hierarchy: How Contestable are U.S. Public Corporations?*, 24 J. CORP. L. 837, 853-55 (1999) [hereinafter Coates, *How Contestable?*]; John C. Coates IV, *An Index of the Contestability of Corporate Control: Studying Variation in Legal Takeover Vulnerability* (Working Paper, July 17, 1999) [hereinafter Coates, *Index*]. But courts have been reluctant to permit companies to adopt midstream defenses that substantially impede proxy fights. See, e.g., *Chesapeake Corp. v. Shore*, 2000 Del. Ch. LEXIS 20 (Del. Ch. Feb. 11, 2000) (striking down bylaw amendments that would have required supermajority shareholder vote to amend bylaws); *Blasius Indus. v. Atlas Corp.*, 564 A.2d 651, 654-56 (Del. Ch. 1988) (striking down bylaw amendments that would have impaired consent solicitation); *Quickturn Design Sys. v. Mentor Graphics Corp.*, 721 A.2d 1281, 1291-93 (Del. 1998) (striking down type of pill that would have impaired proxy fight); *Carmody v. Toll Bros. Inc.*, 723 A.2d 1180, 1189-94 (Del. Ch. 1998) (striking down a type of pill that would have impaired proxy fights). Cf. *Invacare Corp. v. Healthdyne Technologies, Inc.*, 968 F. Supp. 1578, 1580 (N.D. Ga. 1997) (upholding type of pill that would have impaired proxy fights under Georgia law); *Amp Inc. v. Allied Signal Inc.*, 1998 U.S. Dist. LEXIS 15617, (E.D. Pa. Oct. 8, 1998) (upholding a type of pill that would have impaired proxy fights under Pennsylvania law).

27. See Coates, *Index*, *supra* note 26 (describing method of studying how long bids can take, given target’s defenses). See also Part IV.G.5 and Figure 2 *infra* (control can be obtained by proxy fight in less than ninety days at two-thirds of sample).

28. For data on 1995, see Coates, *How Contestable?*, *supra* note 26, at 855. Data on 2000 come from the Securities Data Corporation database, now maintained by Thomson Financial Securities Data.

Because midstream defenses have been constrained by legal rules and skeptical investors, the moment prior to going public is the one time at which U.S. companies have been able with certainty to reduce their legal takeover vulnerability. After an IPO is complete and ownership dispersed,²⁹ the takeover defenses of a public company in the U.S. in the 1990s have generally been fixed.³⁰ Only at the IPO stage does a company continue to have the ability to choose different types and amounts of defenses that will regulate hostile bids for the life of the company. For that reason, the legal advice a company receives about defenses just prior to its IPO is particularly important.

As will be described in Part III, scholars have long debated the effects of defenses on companies and their shareholders, and the evidence to date is at best inconclusive.³¹ Many believe defenses harm shareholders by making it harder for takeovers to discipline managers and increasing the "agency costs" between shareholders and managers caused by the separation of ownership from corporate control.³² Others believe defenses may be privately beneficial by providing targets with "bargaining power," by ameliorating the effects of "market myopia," or by allowing some shareholders to preserve "private benefits of control."³³ Before reviewing traditional theories about defenses, however, one feature of such theories should be noted: prior scholarship on defenses has uniformly made the simplifying assumption that if defenses are good for a given company, they will be adopted by that company; if they are bad, they will not be adopted.³⁴ The theory of this Article, however, is that reality is more complex. Defenses may be adopted even if they are harmful, or omitted even if beneficial, because the decision to adopt defenses is made not by "companies" or by the owners or managers of those companies, but by lawyers.

II

BLAME THE LAWYERS

Companies about to go public for the first time employ two sorts of specialized agents: investment bankers and lawyers. Generally, bankers provide advice about the pricing and timing of the IPO, and manage the sales process itself.³⁵ Lawyers provide advice about securities laws and

29. Ownership dispersion takes some time. *See infra* Part IV.G.6.

30. For evidence, *see infra* Part IV.G.6 (reviewing rarity of new defenses being adopted post-IPO by companies studied).

31. *See* Coates, *Critique*, *supra* note 23 (reviewing and critiquing inconclusive empirical studies of defenses).

32. *See infra* Part III.A.

33. *See infra* Part III.B.

34. *See* Daines & Klausner, *supra* note 8, at 88-89; Easterbrook & Fischel, *supra* note 9, at 1161; Field, *supra* note 8, at 16; Field & Karpoff, *supra* note 8, at 20.

35. SECURITIES UNDERWRITING: A PRACTITIONER'S GUIDE (Kenneth J. Bialkin & William J. Grant, Jr. eds., 1985) (describing roles of lawyers and bankers); CHARLES J. JOHNSON, JR., CORPORATE

disclosure obligations, and manage the Securities Exchange Commission ("SEC") registration process.³⁶ Each professional may influence the take-over defenses a firm adopts prior to the IPO. Without legal advice, the firm is unlikely to adopt defenses. Without financial advice, the firm will not know whether or how a given defense will affect the IPO price. Companies are dependent on their specialized agents for information and advice that bears directly on what defenses are likely to be adopted during the IPO process.

Given that background, variation in defenses at the IPO stage can be explained by positing inefficiencies in the provision of either financial or legal advice. If defenses are generally inefficient and the IPO pricing process itself is efficient, companies will pay a pricing penalty for adopting them. But if bankers provide poor advice to companies about the price effects of defenses, then companies may adopt defenses despite such a pricing penalty.³⁷ If, on the other hand, defenses are generally optimal for pre-IPO owner-managers, either because they increase company value or decrease it by less than the control they provide is worth to initial owner-managers, then companies should adopt them. But companies may still not adopt defenses if the lawyers on whom they depend fail to advise adoption or if bankers fail to provide good advice about their price effects.

For reasons discussed in Part II.G, it seems more likely on a priori grounds that market inefficiencies would occur in the market for legal services before it would occur in the market for financial advice. Thus, the explanation proposed and tested in this Article for why defenses vary at the IPO stage is failure in the market for legal services. In short: blame the lawyers.

A. *The Lawyer-Client Relationship and Agency Theory*

Just as division of labor between shareholders and managers creates the classic agency relationship at the heart of conventional economic analysis of corporate law, so the division of labor between lawyers and clients creates a classic agency relationship, in which the client is dependent

FINANCE AND THE SECURITIES LAWS 95-100 (1990) (same); Seymour Jones et. al., *Going Public, in THE ENTREPRENEURIAL VENTURE* 403-06 (William A. Sahlman & Howard H. Stevenson eds., 1992) (same).

36. *Id.*

37. If lawyers advise clients to adopt defenses even when they are harmful, that advice will generally not result in too many defenses unless clients also receive bad advice from bankers about the price effects of defenses. To see the reason for the asymmetry, note that defenses have no plausible negative effects at the IPO stage other than by reducing the IPO price, whereas defenses will in any event provide control benefits to pre-IPO owner-managers, whether or not they also have price effects. Thus, for defenses to be adopted too frequently, a failure would need to occur in the market for banker advice, so that the negative effect of defenses (on price) would not be understood by owner-manager clients.

on lawyers.³⁸ Lawyers write the documents in which defenses are (or are not) contained. Takeover defenses are "chosen" in the first instance not by a manager or shareholder, who focus on other, more important tasks (such as lining up investors, working with investment bankers on the "roadshow,"³⁹ and running the business), but by a lawyer. Charters, by-laws, stock certificates, and prospectuses are all generated by law firms, drafted by associates (or paralegals), reviewed by partners (or associates), and only cursorily (if at all) reviewed by nonlawyers during the IPO process.

Given this dependency on lawyers by corporate clients and their owner-managers, basic economic theory of agency provides a simple explanation of why lawyers might not do what is in the best interests of their clients. Put simply, principals (clients) have little information about what their agents are doing and about the effects of agents' actions, which makes it possible that agents will not always act in their principals' best interests. Clients can monitor their lawyers by asking questions, scrutinizing documents, and thinking about defenses themselves. But most clients will be ill-equipped to monitor implementation and will defer to the advice of the lawyer for the same reasons the client has retained the lawyer to begin with (lack of expertise, division of labor).⁴⁰

Gaining proficiency with defenses, providing good advice about defenses, and implementing clients' decisions based on that advice all require effort on the part of lawyers. Were clients able to perfectly monitor lawyers, this is the type of effort in which clients would want lawyers to engage. Since clients cannot easily tell if lawyers are expending that effort, lawyers have little incentive to do so. As such, lawyers will only undertake that minimal level of effort that can be easily monitored by clients. Lawyers will devote the rest of their time and energy to other activities, such as

38. The dependency between lawyer and client arises regardless of whether shareholders and managers are the same people, as is sometimes the case prior to an IPO.

39. See FREDERICK LIPMAN, *GOING PUBLIC* 59, 165 (1997) (describing road shows as hectic and requiring full attention from managers and bankers; Microsoft's IPO road show covered eight cities, including London and Edinburgh, in ten days). When Glendale Federal Bank raised equity capital to meet regulatory guidelines in the early 1990s, managers spent eight weeks holding twenty large investor meetings from Los Angeles to London, plus many more small meetings, conference calls, and review sessions. See also Official CS First Boston / Glendale Federal Bank Roadshow Tee-shirt (on file with author).

40. MACKLIN FLEMING, *LAWYERS, Money AND SUCCESS* 26 (1997) (former judge and practitioner critical of high legal fees in litigation but likening valuation of legal services to "pricing of modern art," subject to "unending analysis and interpretation," the "extent and ultimate worth" of which cannot readily be determined"); Donald C. Langevoort & Robert K. Rasmussen, *Skewing the Results: The Role of Lawyers in Transmitting Legal Rules*, 5 S. CAL. INTERDISC. L.J. 375, 401-02 (1997) (in-house corporate counsel may have limited competence and their own agency problems). Older, larger, and more profitable companies are more likely to have better and larger in-house legal staffs more capable of monitoring outside firms. On the rise of in-house counsel, see LAW FIRM MANAGEMENT § 1.3.2 (Susan S. Samuelson ed., 1994); Abram Chayes & Antonia H. Chayes, *Corporate Counsel and the Elite Law Firm*, 37 STAN. L. REV. 277 (1985).

are still worse than other types of legal advice because of the particular character of advice concerning takeover defenses.

Evaluating legal services is more difficult than evaluating other types of goods or services. Economists distinguish three types of goods or services: search goods, consumption goods, and credence goods.⁴⁵ Search goods are those whose quality can be readily ascertained by inspection prior to consumption, as with postcards. Experience goods are those whose quality can generally be learned only after they are purchased and consumed, as with a meal at a restaurant. Credence goods are those whose quality may never be fully known by the consumer, as with automobile parts, for example. Legal services rarely fall into the category of search goods. Instead, legal services often fall into the category of "experience goods." Experience goods obviously pose a risk of deception and raise special contracting problems. Legal advice often, however, is a "credence good," for which quality may never be fully known.⁴⁶ Legal advice about defenses is certainly not a search good. Few legal consumers, even sophisticated consumers, can fully know the quality of legal services to be provided simply by meeting a lawyer or reviewing the lawyer's public record. Nor will consumers usually know the quality of legal services after they are received, since legal advice often involves questions of judgment under conditions of uncertainty that will persist even after a trial or negotiation or other legal event is completed.

What constitutes the "best" legal advice about defenses at the IPO stage is unclear for two reasons. First, the costs and benefits remain theoretically controversial⁴⁷ and empirically uncertain.⁴⁸ Second, takeovers are sufficiently uncommon so that a particular company may never encounter one. Although evidence will be presented in Part IV that is consistent with the view that defenses are generally optimal for pre-IPO owner-managers, even that evidence is far from conclusive, and it remains possible that defenses are good only for some companies, or for none at all. As a result of deep and continuing uncertainty about the "merits" of defenses, it is unlikely that clients will be able to know for certain whether the advice about defenses they received at the time of IPOs in the 1990s was good, bad, or indifferent. Knowing this, lawyers were and are even more likely than

controls could mean mistakes were rare or trivial, or not clear ex post, or that clients are unable or unwilling to sanction firms.

45. For the distinction between search goods and experience goods, see Philip Nelson, *Information and Consumer Behavior*, 78 J. POL. ECON. 311, 311 (1970). For the distinction between experience goods and credence goods, see Darby & Karni, *Free Competition and the Optimal Amount of Fraud*, 16 J.L. & ECON. 67, 67 (1973), and sources cited *infra* note 46.

46. Winand Emons, *Credence Goods and Fraudulent Experts*, 28 RAND J. ECON. 107 (1997); Asher Wolinsky, *Competition in Markets for Credence Goods*, 151 J. INSTITUTIONAL & THEORETICAL ECON. 117 (1995).

47. See *infra* Part III.

48. See Coates, *Critique*, *supra* note 23, at 336.

the solicitation of other potential clients, "grandstanding" activities (effort that produces highly visible and impressive results),⁴¹ or the pursuit of leisure activities.

The possibility that lawyers shirk their obligation to act with due care is supported by direct evidence of mistakes by lawyers found in the sample (described in Part IV), which suggest that a significant number of attorneys are not paying much attention to basic corporate documents.⁴² Somewhat astonishingly, several companies in the sample also used "form" charters and bylaws published by third-party service providers (for example, Blumberg) for generic corporations, with no effort to tailor the forms to the firm or the fact that it was going public.

B. *Takeover Advice as a Credence Good*

Standard economic theories of agency also suggest that the potential for mischief in the relationship between lawyers and clients is particularly large. Information asymmetries between lawyer and client in the IPO context are likely to be serious,⁴³ and will be exacerbated by uncertainty and time: any effect takeover defenses have is unlikely to emerge for years, at which point the lawyers involved may no longer have a relationship with the client.⁴⁴ But agency problems with legal advice about takeover defenses

41. Cf. PAUL A. GOMPERS & JOSH LERNER, *THE VENTURE CAPITAL CYCLE* 240-60 (1999) (discussing "grandstanding" in the venture capital industry).

42. The problem of mistake-ridden corporate lawyering is not new: "The Secretary of State of New York advised that 20-25% of the 56,000 certificates [of incorporation] filed yearly around 1960 were rejected for failure to comply with formal requirements." DETLEV F. VAGTS, *BASIC CORPORATION LAW* 78-79 (1989).

43. Unlike stock markets, where full disclosure is enforced by a strict liability legal regime, clients rely on lawyers to provide them with not only legal knowledge itself but also information necessary to evaluate the quality of the legal knowledge provided. George M. Cohen, *When Law and Economics Met Professional Responsibility*, 67 *FORDHAM L. REV.* 273, 283-89 (1998) (observing that asymmetric information between client and lawyer results in agency problems); Eugene Fama & Michael Jensen, *Separation of Ownership and Control*, 26 *J.L. & ECON.* 301, 315-17 (1983) (monitoring of lawyers may be impossible even for other lawyers); Ronald J. Gilson, *The Devolution of the Legal Profession: A Demand Side Perspective*, 49 *MD. L. REV.* 869, 889-92 (1990) ("peculiar characteristic of legal services is that a prospective client will have difficulty determining the quality of services *even after they are rendered*," impairing market responses of collectivization of information, warranties, and reputation).

44. See FLEMING, *supra* note 40, at 26 (legal services may be hard to evaluate if effects or services take place over a period of years); MICHAEL H. TROTTER, *PROFIT AND THE PRACTICE OF LAW* 83-89 (1997) (summarizing surveys and anecdotes of "lawyer burnout," leading to higher levels of early retirement); AMERICAN BAR ASSOCIATION, *STATE OF THE LEGAL PROFESSION 1990* 11-12 (1991) [hereinafter 1990 ABA SURVEY] (45% of post-1984 graduates changed jobs once by 1990, of which 76% had three or more employers). If mistakes are large and clear, and clients able to impose tort or reputational sanctions for past mistakes of now-departed lawyers, firms would have an incentive to use internal quality controls to prevent mistakes. Rigorous controls on contract terms such as pre-IPO governance terms are (or were) uncommon. ROBERT L. NELSON, *PARTNERS WITH POWER: THE SOCIAL TRANSFORMATION OF THE LARGE LAW FIRM* 91 (1988) (characterizing "traditional management" of law firms as "ad hoc," with "no regular monitoring"); *LAW FIRM MANAGEMENT*, *supra* note 40, § 2.2.4, at 2:14 (agreeing that large law firm management has been "modified anarchy"). Lack of such

agents in other contexts to exert suboptimal effort in learning or advising about defenses.⁴⁹ Clients, in turn, can be expected to anticipate lawyer behavior in this respect, with the upshot being a socially inefficient level of legal advice being provided, relative to first-best welfare, as with credence goods generally.⁵⁰

The possibility that there is a socially inefficient level of effort being exerted by lawyers is supported by the fact that in surveys, lawyers themselves acknowledge frequently making mistakes, a phenomenon that extends to the largest and most reputable law firms. A recent *American Lawyer* survey of partners at firms in the AmLaw 100 finds that over half (52%) of partners surveyed who worked sixty-or-more-hour workweeks "worked so fast they made mistakes."⁵¹ Among partners working less than fifty-five hours per week on average, 35% admitted they made mistakes. Anyone who has worked in a law firm knows that, on average, partners work shorter workweeks than associates, so these figures understate errors among lawyers at law firms generally. Partners also increasingly delegate important legal tasks.⁵² Self-reporting also underestimates errors, not only

49. See text accompanying *supra* note 41.

50. Emons, *supra* note 46, at 117 (when "consumers can never be certain of the quality of . . . services [of] experts . . . , experts have strong incentives to cheat"; developing a model in which credence goods are consumed, but at inefficient levels relative to first-best); Wolinsky, *supra* note 46, at 130 ("despite . . . intense competition, . . . markets for . . . credence goods . . . may feature some degree of fraud," developing a model in which credence goods are consumed but with an equilibrium that does not maximize expected customers' surplus). Lawyers can use reputation to improve matters, but only under certain conditions. See *infra* note 94.

51. *The Partner Survey: The View From the Top*, AM. LAW., June 1999, at 79, 82. On whether lawyers are generally incompetent, see Warren E. Burger, *A Sick Profession?*, 5 TULSA L.J. 1 (1968) (majority of trial lawyers incompetent); Roger C. Cramton & Erik M. Jensen, *The State of Trial Advocacy and Legal Education: Three New Studies*, 30 J. LEG. EDUC. 253, 253-56 (1979) (reviewing studies finding federal judges report 9% of trial lawyer performances incompetent); 1990 ABA SURVEY, *supra* note 44, at 33, 56 (70% of lawyers report observing incompetence by other lawyers "sometimes" or "often", 10% "often," 30% of private practitioners report career advancement not determined by quality of work); GEOFFREY C. HAZARD ET AL., *THE LAW AND ETHICS OF LAWYERING* 150 (3d ed. 1999) ("defining competence is . . . difficult"; ethical "discipline for incompetence [is] relatively rare").

52. At many firms, associates, "legal temps," paralegals, or secretaries, with little training, perform important legal tasks. *Leverage—Call in the Troops*, AM. LAW., July 1999, at 84-85 (ratio of associates to partners rebounded from downturn in early 1990s to reach all-time levels in 1998); 1990 ABA SURVEY, *supra* note 44, at 20 (58% of lawyers report not receiving frequent instruction, training, or feedback from superiors); MARC GALANTER & THOMAS PALAY, *TOURNAMENT OF LAWYERS* 65-66 (1991) (paralegals increased more rapidly in large firms from 1972 to 1987 than lawyers did; legal temp agencies grew from zero in 1983 to twelve in 1988); Mark C. Suchman, *On Advice of Counsel: Law Firms and Venture Capital Funds as Information Intermediaries in the Structuration of Silicon Valley* 9, 105 (1994) (secretaries) (unpublished Ph.D. dissertation, Stanford University) (on file with author); TROTTER, *supra* note 44, at 49, 57, 76, 101-11 (decreasing quality of legal work). Such delegation is due in part to the "doubling of associate leverage from 1960 to 1990," and resulting fall in average age of active lawyers. *Id.* at 101 (founder and managing partner of two large Atlanta law firms with thirty years practice experience, stating "as the . . . number and percentage of inexperienced associates have increased, the average level of maturity and experience of major firm lawyers has . . . declined and with it the quality and value of the firms' work product").

because lawyers may be worried about their reputations (researcher promises of anonymity notwithstanding), but also because lawyers will not always notice their own mistakes as they make them, particularly in areas where they are not expert.

C. *The Market for Lawyers in the IPO Context*

Making matters worse for clients in need of advice about takeover defenses are characteristics of the market for lawyers in the IPO context. IPO lawyers do not specialize in takeovers or takeover defense, for the most part.⁵³ The legal market has been sufficiently segmented for the past fifteen years that most lawyers who routinely work on hostile takeovers do not routinely advise companies going public for the first time, and vice versa.⁵⁴ It is rare for companies going public to be advised by lawyers who have current proficiency in takeovers. Even whole firms specialize in one or the other. Leading takeover firms, such as Wachtell Lipton, do not handle a high volume of IPOs; and leading IPO firms, such as Wilson Sonsini, do not (or did not during the early 1990s) handle a high volume of takeovers.⁵⁵

In addition, lawyers representing start-up companies often have multiple relationships with pre-IPO financiers and managers. Unlike investors as a class and many pre-IPO shareholders, owner-managers are often not repeat players in the IPO market. In reviewing Suchman's studies of Silicon Valley,⁵⁶ Bernstein notes that Valley lawyers "may have a strong financial incentive to draft contractual provisions that favor . . . [venture capital] funds at the expense of . . . entrepreneurs."⁵⁷ Regarding defenses, in particular, IPO law firms may correctly anticipate that while their

53. See LAW FIRM MANAGEMENT, *supra* note 40, § 1.4, at 1:32-39 (contrasting M&A firms from "high-tech" firms, characterizing Wilson Sonsini as example of "high tech" firm competing not on basis of "proficiency" but by offering "broad" services to "narrow" clientele); Lawrence M. Friedman et al., *Law, Lawyers, and Legal Practices in Silicon Valley: A Preliminary Report*, 64 IND. L.J. 555, 562 (1989) (same).

54. Specialization is complex: lawyers specialize by client, activity (litigation, negotiation, counseling), and legal knowledge. Degree of specialization can be measured by time, revenues, lawyer self-identification, or organizational structure. But none dispute the general notion that lawyers are and have become increasingly specialized. RICHARD L. ABEL, *AMERICAN LAWYERS* 122-23 (1989) (specialization began in 1940s and has increased with each decade; by 1982, 70% of Chicago lawyers surveyed "considered themselves specialists"); GALANTER & PALAY, *supra* note 52, at 48-49 (departmentalization, specialization, and differentiation of large law firms all increased from 1960s to 1980s); LAW FIRM MANAGEMENT, *supra* note 40, § 1.3.2; *id.* § 2.2.4, at 2:13 ("trend is toward an increased division of labor"); TROTTER, *supra* note 44, at 50-51 (increased law firm specialization due to client demand for speed, more law, more competition, more in-house corporate law generalists, and younger lawyers, who specialize to justify high billing rates).

55. Exceptions exist: Skadden Arps had and has the size and market position to give it a significant role in both IPOs and takeover fights.

56. SUCHMAN, *supra* note 52.

57. Lisa Bernstein, *The Silicon Valley Lawyer as Transaction Cost Engineer?*, 74 OR. L. REV. 239, 248 n.43 (1995).

relations with venture capitalists will persist after the IPO, their relations with managers may diminish or disappear after the IPO if the company fails. Even if the company succeeds, it may become active in merger activity and need a new law firm with proficiency in that area.⁵⁸ Relative to VC interests, the interests of owner-managers may get short shrift from IPO lawyers.⁵⁹ Even if there is no direct conflict between VC and manager interests, IPO law firms may allocate effort and attention to the former rather than the latter. Since VCs typically sell stakes in start-up companies shortly after an IPO,⁶⁰ they have little ongoing interest in whether the company is well-protected from takeover bids. This is not to say VCs would oppose defenses.⁶¹ Still, in general, VCs, and lawyers looking out primarily for VC interests, would not care as much about defenses as well-informed or well-advised owner-managers.

D. Barriers to Competition in the Market for Lawyers

The market for legal services is also protected from full and free competition by a variety of barriers to entry. Law firms have long been protected by regulatory barriers to entry, in the form of the bar exam, a three-year professional degree, and no access to public capital markets,⁶² which make the establishment of new law firms more difficult than otherwise would be the case. In addition, such regulations generally prevent other businesses (such as accounting firms or for-profit corporations) from providing third-party legal services, and thereby restrict the number of people

58. If a firm grew or bought M&A proficiency, the conflict described in the text would disappear. Wilson Sonsini has been pursuing this strategy: its M&A activity grew significantly in the 1990s, representing @Home in its \$6.7 billion merger with Excite, and Netscape in its \$4.2 billion acquisition by AOL. Decisions at the IPO stage continue to affect clients in the M&A context, however. *E.g.*, *Quickturn Design Sys. v. Shapiro*, 721 A.2d 1281 (Del. 1998) (Wilson Sonsini client forced to sell to white knight after Mentor bid, largely because of Quickturn's near absence of pre-IPO defenses left it vulnerable to proxy fight); Krysten Crawford, *Quickturn Design Systems*, THE RECORDER, Dec. 15, 1993, at 2 (reporting Quickturn IPO, with Larry Sonsini as company counsel); see *infra* note 236 (discussing Quickturn fight).

59. Cf. SUCHMAN, *supra* note 52, at 111-13, who describes Silicon Valley lawyers "subtly steering [entrepreneur] clients toward negotiating positions that comport with prevailing community practices."

60. See GOMPERS & LERNER, *supra* note 41, at 270 tbl.13.1 (on average, VCs distribute 70% of stake in portfolio firm to VC fund investors within one year of IPO).

61. Indeed, if defenses increased company value enough to improve IPO pricing, VCs would want them, and even if defenses have mixed or neutral effects on IPO prices, VCs with experience in the takeover arena may even suggest that managers consider adopting them, as a way of looking out for their entrepreneur clientele and enhancing the VCs' reputation. Black & Gilson propose that VCs have an implicit contract to return control to successful entrepreneurs by allowing start-ups to go public even if IPO proceeds are lower than the price a larger, existing company would pay. Bernard S. Black & Ronald J. Gilson, *Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets*, 47 J. FIN. ECON. 243, 257-64 (1998).

62. See generally Edward S. Adams & John H. Matheson, *Law Firms on the Big Boards?: A Proposal for Nonlawyer Investment in Law Firms*, 86 CALIF. L. REV. 1 (1998) (reviewing ethical rules that prevent sales of equity by law firms to outsiders, and proposing that such rules be lifted).

providing legal services.⁶³ Lack of access to the public capital markets has meant that law firms have not historically invested in systems and technology to the same extent as other professional service firms,⁶⁴ which constrains competition among lawyers in providing technology-based services.

Lawyers also enjoy a large amount of "natural" (that is, nonregulatory) protection from vigorous competition. The supply of individuals with the talents and inclination to succeed as top-tier corporate lawyers may be inherently (or "naturally") limited.⁶⁵ Clients also have reasons to avoid switching to new lawyers at the IPO stage.⁶⁶ The clients' pre-IPO lawyers are likely to be needed during and after the IPO, simply because they will be more knowledgeable about many aspects of the clients' legal affairs than new lawyers will be, particularly arrangements with VCs or other pre-IPO outside shareholders, lenders, suppliers, and customers. Pre-IPO law firms play an important role in controlling access to capital providers and other third parties, which can give them significant market power, at least in the short run.⁶⁷ Long-standing personal relationships, a sense of debt or gratitude if lawyers provided below-market fees during the start-up period, concerns about confidentiality,⁶⁸ and relationship-specific information all deter clients from switching law firms. Gilson and Mnookin characterize the lawyer-client relationship as "approaching" a "bilateral monopoly."⁶⁹ Switching costs may partly explain the appearance of small law firms

63. ABEL, *supra* note 54, at 48-71; JOSEPH W. BARTLETT, *THE LAW BUSINESS: A TIRED MONOPOLY* 7-23 (1982).

64. BARTLETT, *supra* note 63, at 27-36. *See also infra* Part II.G.

65. Gillian K. Hadfield, *The Price of Law: How the Market for Lawyers Distorts the Justice System*, 98 MICH. L. REV. 953, 984-92 (2000) (discussing natural barriers to competition in legal market).

66. Hiring two firms has its own problems. *See infra* text accompanying notes 78-79 & 92-93.

67. SUCHMAN, *supra* note 52, at 144, 150 tbl.6.2 (Wilson Sonsini drafted 43% of 107 first-round high-tech VC financing contracts, making up "full population" of such investments by two leading VC funds in Silicon Valley 1975-90); *Id.* at 109 (giving example of market power); *Id.* at 96 ("Wilson Sonsini . . . alone controls access to between 40% and 60% of all the venture capital in Silicon Valley") (citing Gail D. Cox, *A Valley of Conflicts*, NAT'L L.J. June 20, 1988, at 1, 48-49); Bernstein, *supra* note 57, at n.65 ("Given their control over Silicon Valley's capital flow . . . and their active role in creating and transmitting . . . information . . . Silicon Valley lawyers [may be] able to exercise a great deal of market power."); Friedman et al., *supra* note 53, at 562 (same).

68. FLEMING, *supra* note 40, at 27 (clients "reluctant to disclose important confidences to [new] lawyers . . . a factor [that] at times . . . may overrule all others, including costs"). If a client sues a law firm for malpractice, for example, the law firm's duty of confidentiality falls away.

69. Ronald J. Gilson & Robert H. Mnookin, *Sharing Among the Human Capitalists: An Economic Inquiry into the Corporate Law Firm and How Partners Split Profits*, 37 STAN. L. REV. 313, 359 (1985) (observing that lawyer-client "relationship approaches a bilateral monopoly" because of relationship-specific information); Gilson, *supra* note 43, at 897-99; *see generally* Paul Klempner, *Markets with Consumer Switching Costs*, 102 Q.J. ECON. 375 (1987) (arguing that switching costs create market power). For older, larger and more profitable companies, law firm switching costs may be less important, and increasingly so. Gilson, *supra* note 43, at 914-16; LAW FIRM MANAGEMENT, *supra* note 40, § 1.3.1, at 1:18. Whether such costs are now associated with individual lawyers, rather than law firms, as lateral hiring and lawyer mobility have increased, *id.*, does not affect whether such costs reduce market discipline and increase lawyer-client agency cost for start-ups.

(fewer than twenty-five lawyers) as corporate counsel in 10% of the IPO sample analyzed in Part IV, despite the general trend toward large size in the corporate law firm market.⁷⁰ At times, the costs of switching may be worth it, as when an actual takeover bid appears on a company's doorstep. But at the time of an IPO, the remoteness of takeover bids may make retention of new counsel with takeover proficiency a negative net present value proposition.

E. The Mechanics of the Production of Takeover Defenses

If takeover proficiency were distributed widely among and within law firms, including down to the lowest-level associates, the lawyer-client agency problems might not be serious. But as noted above, IPO lawyers often lack firsthand experience in takeover fights. They thus lack takeover-law proficiency (1) to decide what defenses to advise a client to adopt, or (2) to implement the decision once made. Nonexpert lawyers have three general methods of handling these two tasks. First, lawyers might research the issue and arrive at their own answers. Second, they might talk to lawyers with takeover expertise, either in their own firm if possible or at other firms. Third, they might rely on "boilerplate," form documents used in prior IPOs.

1. What if the Lawyer Researches the Issue?

Having lawyers research the issue and arrive at their own conclusion is expensive and error-prone. Initially, theories about defenses are highly contentious and unresolved (as will be discussed in Part III), and empirical evidence on what defenses are best remains uncertain.⁷¹ Even if the decision of whether to adopt defenses were simple at the highest level of generality, defense analysis is complex when it comes to specifics. Laws vary from state to state, and even if a company sticks to conventional terms and does not try to innovate, it will need to make three choices for each of at least eleven terms: whether to include a given term; whether to include the term in its charter or its bylaws; and under what circumstances and by whom the term can be modified in the future. Together, the number of possible configurations for even a "plain vanilla" set of corporate documents runs into the hundreds of thousands.⁷² Over 75% of the companies

70. Just as important, takeover proficiency is no more likely to be found in firms with IPO proficiency than in firms with pre-IPO proficiency; in fact, law firms are more likely to have proficiency in both of these early stages of a company's lifecycle than they are to have proficiency in takeovers and one (but not both) of these areas. Cf. Friedman et al., *supra* note 53, at 558-59 ("consumption needs for lawyers sharply change [when company decides] to 'go public'"; emphasizing securities law focus of IPO lawyer practice; distinguishing takeover specialists).

71. See Coates, *Critique*, *supra* note 23.

72. If eleven basic but important terms described in Appendix A take on three values (yes, no, silence), and default law can be chosen from two states (Delaware or home state), the resulting possible

analyzed in Part IV had a set of fifteen governance terms that were unique within the sample, and no one set accounted for more than 4% of the sample.

Although defense advice also involves questions of judgment, at least on its face, little to no guidance can be found in the most relevant practical literature. A review of the best legal treatises available to assist practitioners, for example, suggests that experienced corporate attorneys pay little attention to defenses during the IPO process. One treatise in particular, *Venture Capital and Public Offering Negotiation*, has been highly successful since its first publication in 1983. Now in a third edition,⁷³ the treatise runs over 1,300 pages in thirty-seven chapters, and is coauthored by the pantheon of the venture capital bar, including lead author Michael Halloran of Pillsbury Madison; Larry Sonsini, name partner of Wilson Sonsini; Lee Benton, managing partner of Cooley Godward; Robert Gunderson, founder of Gunderson Dettmer; and Richard Testa, founder of Testa Hurwitz.⁷⁴ Topics include the range of legal issues that arise in IPOs. However, in contrast to a carefully annotated form of charter to be used at the time venture capitalists first invest, before the IPO,⁷⁵ the treatise provides no good advice about (or models for) takeover defenses for a company about to go public.⁷⁶ Other treatises or practitioner outlines addressing IPOs are no more useful to the nonexpert lawyer.⁷⁷

combinations are $3^{11} \times 2 = 354,294$. Many configurations will be equivalent; many will not represent meaningful arrangements. But the practical complexity is still daunting. A study of 513 large companies found 318 different combinations of 20 terms reviewed (fifteen firm-specific terms and five terms imposed by state antitakeover laws). Morris G. Danielson & Jonathan M. Karpoff, *On the Uses of Corporate Governance Provisions*, 4 J. CORP. FIN. 347, 366-67 (1998).

73. MICHAEL HALLORAN ET. AL., *VENTURE CAPITAL & PUBLIC OFFERING NEGOTIATION* (3rd ed. 1997). Originally published by Prentice Hall Law & Business, it is now published by Aspen Law & Business (1997), with supplements through the year 2000.

74. Other coauthors of note include J. Robert Lovejoy, head of the general banking group of Lazard Freres & Co., a major investment bank; Daniel M. Kaufman, senior executive of Dream Works Interactive LLC; Keith Kearney, partner at Davis Polk & Wardwell; Thomas W. Kintner, corporate counsel for Madge Networks; and Kathryn B. McGrath, partner at Morgan Lewis & Bockius.

75. HALLORAN ET AL., *supra* note 73, at ch. 8 (addressing voting rights, control rights, and board representation).

76. *See generally id.* at chs. 20-37 (providing no models of charters or bylaws for companies about to go public and omitting discussion of or advice about takeover defenses). To the extent defenses are discussed at all, the treatise implies by omission in its model form of prospectus that companies should not adopt classified boards or limit shareholders power to act by written consent, call special meetings, remove directors without cause, or increase board size. *See id.* at chs. 28-70.

77. In all of the practical guides to or treatises on IPOs, start-ups or venture capital I have reviewed, defenses are not mentioned at all or are only mentioned in passing, with no detailed advice about what defenses, if any, to adopt or how to implement defenses. *E.g.*, JOSEPH W. BARTLETT, *FUNDAMENTALS OF VENTURE CAPITAL* 133-47 (1999) (chapter on "how to . . . go public"); JOSEPH W. BARTLETT, *VENTURE CAPITAL: LAW, BUSINESS STRATEGIES, AND INVESTMENT PLANNING* 262-92 (1988) (chapter on "the initial public offering"); JACK S. LEVIN, *STRUCTURING VENTURE CAPITAL, PRIVATE EQUITY AND ENTREPRENEURIAL TRANSACTIONS* 291-316 (1997) (chapter devoted to "structuring an IPO or sale of the VC-financed portfolio company"); JOHN L. NESHEIM, *HIGH TECH START-UP* 221-54 (1997) (chapter on IPOs); FREDERICK D. LIPMAN, *GOING PUBLIC* (1997); JOHN E.

2. *What if the Lawyer Speaks to a Takeover Specialist?*

If the lawyer turns to another lawyer with some proficiency in takeovers, she faces different difficulties. Clients may be unwilling to foot two lawyers' bills for the same work, so bringing in another lawyer may reduce the IPO lawyer's profit. Worse, a second lawyer may steal the first lawyer's business. A client may (wrongly but understandably) expect that "a corporate lawyer" handling its IPO should have proficiency in a "corporate law" topic like takeover defense. If the IPO lawyer must go to another firm, the second firm may be able to bundle both types of legal advice together, or appear to, for so long as necessary to capture the relationship.⁷⁸ If, on the other hand, the first lawyer minimizes contact between the second lawyer and the client, to minimize the risk of relationship capture, the second lawyer will not have good incentives to provide optimal advice.⁷⁹ Those lawyers with "free" time to perform such tasks may not be the best lawyers for the job; expert takeover specialists, after all, make large amounts of money, and face large opportunity costs for their time.

3. *What if the Lawyer Uses Boilerplate?*

If research and consultation are not effective ways for a lawyer to provide a client with good advice about defenses, that leaves boilerplate as a source of information about what defenses are best for lawyer to advise a client to adopt.⁸⁰ But inexpert reliance on boilerplate can be dangerous. Boilerplate can either be developed internally or borrowed from at least

RILEY & LAIRD H. SIMONS III, *HOW TO PREPARE AN INITIAL PUBLIC OFFERING* 1997 (Practising Law Institute); JAMES B. ARKEBAUER & RON SCHULTZ, *GOING PUBLIC* 85 (1998); STEPHEN C. BLOWERS ET AL., *THE ERNST & YOUNG GUIDE TO TAKING YOUR COMPANY PUBLIC* (1995). It could be argued that practitioners can turn to treatises devoted solely to hostile takeovers and defenses for advice and guidance on those topics, but doing so requires a lawyer to know enough to seek such guidance, a need that does not arise naturally in the IPO process. Also, since such treatises are generally written with large, mature public companies in mind, they do not contain model charters or bylaws or advice written with an IPO in mind. *E.g.*, M. LIPTON & E. STEINBERGER, *TAKEOVERS AND FREEZE-OUTS* (1995).

78. If the IPO lawyer can find a lawyer with some takeover proficiency in her own firm, this risk is mitigated, but there remains some risk that the second lawyer will attempt to become the primary lawyer handling that client's future corporate matters. Gilson & Mnookin, *supra* note 69, at 351 ("it would hardly be surprising were a client's loyalty to shift from its original contact to the lawyer who actually does its work"). This result is particularly likely if the client is going to be engaging in M&A transactions, which have much in common with takeover defense analysis, and less in common with the kinds of disclosure, general corporate and process-oriented advice that IPO lawyers provide.

79. Even if the two lawyers are in the same firm, the second lawyer will often derive little direct benefit from time spent drafting and tailoring documents (and making related decisions) because more profits and power in many firms are allocated to "rainmaking" lawyers who originate new business or client relationships than to "service" lawyers who solely perform legal tasks for an existing client.

80. The nature and likely effects of boilerplate terms are likely to vary by context. The following discussion is confined to boilerplate corporate governance terms, and may not extend to boilerplate terms in contracts or litigation papers. On corporate boilerplate more generally, see Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (or "The Economics of Boilerplate")*, 83 VA. L. REV. 713 (1997).

three sources, of which two are ready-at-hand and very cheap.⁸¹ First, the lawyer can rely on documents used by private companies (private company boilerplate). However, private company boilerplate will leave companies vulnerable to takeover. Private companies do not need defenses, and in fact benefit from having terms that would facilitate hostile takeovers if used by public companies.⁸² The cheapest and easiest boilerplate of all then, a company's own pre-IPO documents, which remain in force if no effort is made to change them, will generally make takeovers quite easy.⁸³

Second, boilerplate (of a sort) can be developed by simply keeping documents to an absolute minimum, so that "gap-filler" default terms supplied by corporate statutes and case law are implicitly adopted (default law). Default law in all fifty states, however, makes takeovers easy.⁸⁴ Delaware default law permits shareholder action by written consent, and default law in states that follow the Revised Model Business Corporation Act ("RMBCA") permits special meetings of shareholders to be called by as few as 10% of the shareholders, which can also greatly facilitate a hostile takeover bid.⁸⁵ IPO lawyers who borrow the language of corporate statutes to write governance terms, or who leave documents silent where they are unsure of the correct choice, will generally choose terms that make takeovers fairly easy. Thus, a bias against defenses is built into the legal system, and to the extent that IPO lawyers lack proficiency in the choice of

81. A firm will be better off developing its own boilerplate than borrowing boilerplate if the firm routinely relies on boilerplate, if for no other reason than word processing costs, but it requires greater initial investment, as well as ongoing costs to maintain. It will often be cheaper for firms to free ride on competitors, or borrow from other sources. Research, development, and maintenance of boilerplate also forms a type of "public good" within a law firm, and basic economic principles predict underinvestment in activities that produce firm-wide benefits. ANDREU MAS-COLELL ET AL., MICROECONOMIC THEORY 361-62 (1995). Cf. TROTTER, *supra* note 44, at 111 (noting that in the context of general legal research memos, "One does not accumulate billable time by preparing indexes to legal memoranda and, of course, billable projects are given precedence. [S]ome firms have employed librarians or other staff to do the job, but the skill level of people hired for this work is often lower than that of lawyers, and they often do not have any experience with the issues researched Many firms abandon the effort when they encounter these obstacles.").

82. Shareholder action by written consent, for example, is a benefit to private companies that wish to avoid formal shareholder meetings with associated expenses. But for public companies, the ability of shareholders to act by written consent can leave companies vulnerable to a hostile takeover bid. *Id.*

83. E.g., Amended and Restated Certification of Incorporation of ABC Corp. (forms of sample "D stage" preferred stock financing documents prepared at Wilson Sonsini) (on file with author) (private company charter neither eliminating ability of shareholders to act by written consent nor establishing staggered board).

84. This may surprise many corporate academics who are accustomed to thinking of state law as greatly impeding takeovers, based on the many antitakeover statutes adopted by states in the 1960s, 1970s, 1980s. The surprise diminishes, however, when it is recognized that in the era of the poison pill, most statutes specifically designed to impede takeovers have had little effect not already achieved by the availability of the poison pill. Additionally, few states have modified their basic rules on how directors are elected, which are the important constraint on takeovers in the era of the pill. See Coates, *Critique*, *supra* note 23, at 320-23.

85. REVISED MODEL BUS. CORP. ACT § 7.02 (1998).

defenses, the companies they advise will tend to go public with minimal defenses in place.

The third source from which a law firm can borrow boilerplate are public companies, which fall into three categories: (1) companies that have recently gone public with law firms that have takeover proficiency; (2) companies that have recently gone public with law firms prominent in the IPO; or (3) other public companies. If an IPO lawyer borrows from a random public company, or one randomly chosen from its own industry or locale, defenses will vary but will on average be fewer in number than is a full set of defenses installed by an expert lawyer. Existing public companies do not have the ability to adopt some midstream defenses even if they would benefit shareholders if adopted pre-IPO.⁸⁶ In addition, at least some law firms will have allowed inertia to determine their clients' governance terms (by relying on private company boilerplate or default law). Thus, the IPO population, too, will on average be biased toward fewer defenses.⁸⁷ Only if the source is a public company that relied on lawyers proficient in takeovers will the boilerplate be based on expert advice, and even then idiosyncratic client needs or unusual features of the company's state of incorporation or ownership structure may make such a company's defenses a poor model.

Finally, suppose a law firm develops its own boilerplate and encourages its lawyers to use it in all IPOs the firm handles. Results will tend to be fairly uniform: firms that encourage lawyers to use standard forms will tend to produce IPO documents that track each other more closely than they will track IPO documents in general. While results will be consistent for that firm, they may be consistently good or consistently bad, from the perspective of advice on defenses. If the firm does a poor job of "reinventing the wheel," if it bases its internal boilerplate on a private company model or relies on default law, or if it borrows from another inapt model, resulting documents will reflect that choice and consistently contain few defenses.

86. Suppose, for example, pre-IPO shareholders place an idiosyncratic value on control, so they would be willing to sell more cash-flow rights for the same price with greater assurance of maintaining control. For such companies, defenses might maximize total value (to both pre-and post-IPO shareholders). But if the company went public without defenses, installing them midstream might represent a transfer of value from outside to inside shareholders. In addition, institutional shareholders do not seem to penalize companies for adopting defenses prior to an IPO, see *infra* note 242, but have in the 1990s routinely voted against midstream adoptions of the very same defenses. See *supra* note 23. Companies that went public before the time defenses became important (in the 1980s) may not have a set of defenses that would be best for a company going public now.

87. While borrowing from recent IPOs will on average increase the number of defenses (since some IPO companies will rely directly or indirectly on lawyers with takeover proficiency), the borrowed boilerplate will still, on average, produce fewer defenses than might be optimal (since some IPO companies will not).

4. *Implementation Once the Decision Has Been Made*

After the decision of what defenses to adopt has been made, lawyers must still implement that decision. Implementation is not intrinsically difficult: writing a provision to classify a board, for example, is hardly rocket science.⁸⁸ Yet as long as clients cannot easily monitor implementation, and few nonlawyers have the patience or training to read and evaluate charters or bylaws, a risk remains that lawyers will shirk implementation. Anyone with firsthand experience in large corporate law firms will attest that senior partners at successful law firms rarely directly perform the tedious and time-consuming task of drafting or even reading basic legal documents. Instead, such tasks are delegated to junior partners, or, increasingly, associates or even paralegals.⁸⁹ Such individuals may lack the training to draft even straightforward provisions effectively. More important than training, however, is the fact that the same agency problem that exists between the client and the most senior lawyer also exists between the most senior lawyer and next most senior lawyer, and so on down the chain. As long as the person actually charged with drafting corporate documents does not have a significant fear of being double-checked, that person will have the same agency-based incentive to shirk on the drafting job.

F. *Potential Constraints on IPO Lawyer Autonomy*

Lawyers may face constraints in advising clients on takeover defenses in IPOs, and in exercising effort and care in implementing client decisions. In principle, for example, a lawyer is ethically obliged to let a client make important decisions about goals, which might mean that a lawyer has a duty to facilitate monitoring by clients. But a lawyer's ability to frame a complex choice for a client, and to decide (in the course of providing advice) what information to give the client, will so shape the choice that client autonomy is the exception and not the rule for defenses, at least in the context of small-and mid-sized companies.

With respect to defenses, ethically conscientious but inexperienced lawyers may even make matters worse, if they lack confidence to provide strong advice about what defenses to adopt. That is because they may be tempted to frame the question as a choice along a continuum: no defenses, some defenses, all (standard) defenses. A client faced with that choice and neutral advice from the lawyer about what to do may often be tempted to

88. Even installation of a classified board is not simple, however, because there are at least two ways (removal and "board packing") for bidders to evade the effect of a classified board, ways that vary in detail by state of incorporation. To make a classified board effective for a company incorporated in a state that follows the RMBCA, for example, a lawyer must vary from default law to eliminate the ability of shareholders to remove directors without cause and to set the number of directors or to fill vacancies. See Appendix B.II.A.1.

89. See *supra* note 52.

mimic Goldilocks, and adopt defenses that are neither too strong nor too weak. Because of the ways defenses interact, however, such a choice will tend to produce a net set of defenses much closer to the "weak" end of the continuum than the middle.⁹⁰ In any event, it seems highly unlikely that ethical duties, which are rarely enforced in this context, constrain corporate lawyers fully.⁹¹

Clients can in theory try to double-check advice by turning to another lawyer, but this generally works only if advice is simple and discrete. Otherwise the second lawyer may provide unverifiably bad advice designed to make the initial lawyer look bad, and the initial lawyer can dismiss any dispute with the second lawyer as competitively motivated or representing a simple difference in judgment.⁹² Further, the client must have some knowledge about the matter in question to even realize that his attorneys may be making a mistake and to seek a second opinion. As in the litigation context, second opinions in the corporate advisory context are of uncertain value, and rare.⁹³

The value and importance of reputation also no doubt serves to constrain lawyers to a degree. However, reputation will only constrain lawyers to the extent that the quality of services is observable by third parties and reputational information can be produced and used by others for profit.⁹⁴ The third parties best able to evaluate law firm error and use those

90. See Coates, *Index*, *supra* note 26, at 67-70.

91. See HAZARD ET AL., *supra* note 51, at 150.

92. TROTTER, *supra* note 44, at 115-17, illustrates the difficulties clients have hiring a second lawyer, even one with special expertise. After a matter handled by Trotter's firm stimulated a Senate inquiry, the client's in-house counsel invited a former SEC general counsel to tell the board about securities law risks, with the prospect of the SEC lawyer handling the SEC investigation that ensued. Trotter describes himself as interrupting former SEC general counsel "to suggest that . . . it might be appropriate to start the deliberations of the board by inquiring if the company had done anything wrong, which in fact it had not . . . In due course my client had the good judgment not to employ the [former SEC general counsel]." *Id.* at 116. In the story, Trotter is vindicated: the "Senate committee held its hearing and moved on . . ." and "the SEC . . . closed its file." *Id.* To Trotter the moral is clear: "It was quite irresponsible for the [former SEC general counsel] to seek to stampede the board into employing him . . ." *Id.* Another lesson, however, is also clear: it is difficult for a client to use unaffiliated lawyers for discrete but related matters.

93. Michael Klausner et al., *The Law And Economics Of Lawyering Second Opinions In Litigation*, 84 VA. L. REV. 1411, 1419-26 (1998).

94. Cf. Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615, 615 (1981) (investment in brand name or reputation may permit otherwise uninformed clients to assess quality of experience goods), and Larry E. Ribstein, *Ethical Rules, Agency Costs and Law Firm Structure*, 84 VA. L. REV. 1707, 1707 (1998) (observing that large law firms have large reputational bonds), with OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING* 395-96 (1985) (reputation deters "contract defection" if defection can be made public knowledge, consequences of defection can be ascertained, and parties who experience or observe defection penalize offenders or successors), Cohen, *supra* note 43, at 288-89 (reputational constraints only function if third parties can verify quality of advice given), and Langevoort & Rasmussen, *supra* note 40, at 410 (observing that asymmetric information that creates lawyer-client agency problem makes it hard for third parties to ascertain lawyer misfeasance).

assessments to their advantage are other law firms, and law firms do occasionally compete by trumpeting each others' mistakes. Yet clients face similar problems evaluating such claims as they do in seeking second opinions.

In theory, to overcome some of these problems, a third-party reputational intermediary not engaged in legal practice might evaluate law firms neutrally, and sell rankings. No pure intermediary of that sort exists, however. The closest substitutes are investment banks, boards, and venture capitalists; they are again likely to impose some constraint on IPO lawyers, but the constraints are likely to be far from complete. Bankers, for example, have their own lawyers, who review firm charter and bylaws and securities. But underwriter lawyers have two fairly narrowly defined roles: most important, they must see to it that the disclosure documents, for which underwriters bear potential liability, accurately describe what the firm documents say; and second, they alert underwriters to any terms that are likely to have price effects.⁹⁵ For the latter task, the lawyers rely on shared experience with underwriters about what terms are "standard," and generally will only raise questions if the firm is adopting some novel or unusual term. Defenses of the sort studied in this Article are neither novel nor unusual, and would generally be accepted without much discussion by underwriters' counsel. More important, the absence of a standard defense would not be itself a reason for an underwriter lawyer to object on behalf of underwriters, as the omission would not plausibly have any effect on the underwriters. Some underwriters' counsel with M&A proficiency may point out missing defenses anyway (to look good in front of the underwriters, or to try to edge out company counsel for future business), so some constraint is imposed on company counsel in this way. But many omissions could easily go uncorrected.

A final and more general set of potential constraints on company counsel in an IPO are legally informed participants in the process, who may provide "curbside" advice to clients or company counsel about what defenses to adopt. These participants include in-house counsel, as well as managers, VCs, directors, investment bankers, or accountants who have legal training or takeover experience. Again, these participants will impose some constraint on company counsel in the IPO process. Still, it is unusual for these participants to have sufficient proficiency, interest, and responsibility for monitoring pre-IPO choice of legal terms to provide more than a weak constraint on company counsel.

95. SECURITIES UNDERWRITING, *supra* note 35, at 144; Jones et al., *supra* note 35, at 406.

G. *The Market for Lawyers Versus the Market for Bankers*

Considering that the other possible source of advice on defenses are bankers, it might be useful to contrast the legal and banking industries to show why it seems plausible that the latter would do a better job of providing good advice on a novel or difficult question. The legal industry is so fragmented as to suggest serious barriers to competition;⁹⁶ the banking industry is much more concentrated, yet not so much so as to suggest oligopoly.⁹⁷ Thus, competition among lawyers is likely to be weaker than competition among bankers, with the result that the latter are likely to provide better services, on average, to their clients. Likewise, relative law firm reputations fluctuate, making reputation a less reliable constraint on lawyers, whereas banker reputation does not.⁹⁸ Lawyers are generally paid flat time or task-based rates; underwriters get paid more if the IPO price is higher.⁹⁹ Lawyers are still mostly local, and even today few firms are truly national; top investment banks have long served the entire U.S., and are increasingly global.¹⁰⁰ Law firms can be owned only by lawyers, and cannot raise outside equity to invest in technology or growth;¹⁰¹ investment banks can be owned by anyone, raise capital easily, and invest massively in

96. Analysis of data on IPOs from Thomson Financial Securities Data ("TFSD") shows that the top four lead underwriters captured a 52.2% market share 1990-2000; the Herfindahl-Hirschman Index ("HHI") for the top twenty-five lead underwriters was 856.

97. Analysis of data on IPOs from TFSD shows that the top four issuer law firms captured 13.6% of their market 1990-2000; the HHI for the twenty-five top law firms was 112. *See also* LAW FIRM MANAGEMENT, *supra* note 40, at § 1.5.1 n.3 ("The legal industry is highly fragmented."); Richard Sander & Douglass Williams, *Why Are There So Many Lawyers? Perspectives on a Turbulent Market*, 14 LAW & SOC. INQUIRY 431, 431 (1989) (noting that the top fifty law firms had 8% market share in 1986); MICHAEL PORTER, COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS 92 (1980) (describing market as fragmented if top 4 firms control under 40%).

98. Analysis of data on IPOs from TFSD shows just one investment bank appeared in the top ten lead underwriters only once for years 1990-92, nine banks appear in the top-ten ranks for all three years, and nineteen banks appear in the top twenty-five ranks all three years. Among law firms, fourteen law firms appear once in the top-ten ranks, only two (Skadden Arps and Shiff Hardin) appear in the top ten all three years, and only eight firms appear in the top twenty-five for all three years. *See also* Richard Carter et al., *Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks*, 53 J. FIN. 285 (1998) (updating prestige rankings based on tombstone and underwriting allotments; making few changes in ratings of top underwriters).

99. ARKEBAUER & SCHULTZ, *supra* note 77, at 85 (IPO lawyers "typically bill by time"); LIPMAN, *supra* note 39, at 30-31 (underwriters charge fees based on percentage of new capital raised).

100. *See, e.g.*, THE GOLDMAN SACHS GROUP, INC., PRELIMINARY PROSPECTUS F-22 to-23 (Apr. 12, 1999) (26% of identifiable assets and 29% of total 1998 revenues from Europe and Asia).

101. BARTLETT, *supra* note 63, at 27-36 (observing that law firms not publicly owned). On whether public ownership would be efficient for law firms, compare Fama & Jensen, *supra* note 43, at 315-17 (arguing that agency costs and difficulty of monitoring makes public ownership infeasible); Oliver Williamson, *Organization Form, Residual Claimants, and Corporate Control*, 26 J.L. & ECON. 351, 358 (1983) (arguing the impossibility of separating client information from and insuring retention of individual lawyers makes public ownership infeasible); Gilson & Mnookin, *supra* note 69, at 329 n.30 (suggesting public ownership of law firms may not be inefficient).

technology and product development.¹⁰² Relative to banks, law firms are egalitarian and inflexible, whereas banks are hierarchical and restructure frequently.¹⁰³ Lawyers traditionally resisted new lines of business; bankers rapidly fill client demand.¹⁰⁴ Lawyers are apt to resist expansion for fear of recession and layoffs; bankers do not blink at layoffs, and banks balloon in booms.¹⁰⁵ As a result, bankers are less likely to oversell services during lean times, or to cut corners during boom times. Again, the likely result is better services from bankers than lawyers, on average. If we had no other evidence and had to choose a likely source of inefficiency to explain the IPO defense puzzle, would we blame the bankers for providing bad advice about the IPO price effects of defenses? Or would we blame the lawyers for providing bad advice about the advantages that takeover defenses can provide?

III

TRADITIONAL COMPANY-LEVEL THEORIES ABOUT DEFENSES

The theory described in Part II—that law firms have sufficient autonomy to determine what defenses their clients will adopt at the IPO—predicts that defenses will (or will not) be adopted without regard to whether defenses actually benefit or harm an adopting company. Instead, adoption turns on beliefs or abilities of a company's lawyers. Traditional theories about defenses, by contrast, can be described as “company-level” theories that provide reasons that defenses directly harm or benefit an adopting company. Such theories simply assume that defense adoption will follow automatically from the “company-level” analysis. Company-level theories,

102. LISA ENDLICH, *GOLDMAN SACHS: THE CULTURE OF SUCCESS* 228 (1999) (by 1995, “every . . . major firm in [the investment banking] industry had . . . transformed themselves into public corporations,” save Goldman Sachs, which went public in 1999); *See* GOLDMAN SACHS, *PRELIMINARY PROSPECTUS*, *supra* note 100, at 82 (stating “technology is fundamental to our overall business strategy, with expenditures of . . . \$970 million in 1998 and a budget of \$1.2 billion in 1999”); David Komansky, *Inheriting the Mantle*, in *THE NEW FINANCIERS* 146 (Charles B. Wendel ed., 1996) (president of Merrill Lynch, stating “technology is my single biggest concern [and] our most rapidly growing expense”).

103. ENDLICH, *supra* note 102, at 22-23 (contrasting relatively flat management structure at Goldman with “steep pyramids [at] most large banking organizations,” but noting that even at Goldman there were “two layers” of top management plus “operational divisions”); ELLEN J. POLLOCK, *TURKS AND BRAHMINS: UPHEAVAL AT MILBANK, TWEED* (1990) (describing multiyear effort needed to change established law firms’ compensation and management structures); BARTLETT, *supra* note 63, at 34-36 (contrasting law firm management with business management).

104. ENDLICH, *supra* note 102, at 17 (“close client relations . . . enables [investment bank Goldman Sachs] to respond quickly to changing client needs”).

105. *Id.* at 222-24 (reporting layoffs in 1983, 1987, 1991, and 1994 of up to 10-20% of workforce at Goldman Sachs, one of world’s most prestigious investment banks); CHARLES R. GEISST, *WALL STREET: A HISTORY* 353-67 (1997) (after 1987 market crash, investment banks contracted and unemployment increased; “Wall Street . . . still susceptible to severe boom and bust cycles”). For evidence on slow growth among law firms, even during the boom years of the 1990s, see text accompanying *supra* notes 181-183.

in other words, assume that once the harms and benefits of defenses are calculated, the sum will straightforwardly determine whether a company will adopt defenses. If the harm is greater than the benefit, defenses are bad, and will not be adopted; if the benefit is greater than the harm, defenses are good, and will be adopted. These company-level theories will provide the basis for the alternative hypotheses to be tested in Part IV, in competition with the theory developed in Part II.

A. Theories in Which Takeover Defenses Are All Good or All Bad

Hostile takeovers have stimulated a large amount of legal and economic scholarship over the past twenty years,¹⁰⁶ and defenses have stimulated a striking split of opinion between legal academics, on the one hand, and practicing lawyers, judges, and legislators, on the other. Exceptions exist, but academics have generally opposed defenses, and practitioner-commentators have generally supported them. To be sure, positions on both sides have been more moderate than merely noting the split might suggest: no practitioner endorses all defenses, regardless of the circumstances,¹⁰⁷ and few academics oppose all defenses.¹⁰⁸ Still, the split is vividly illustrated by the policy positions articulated at the outset of the 1980s by a leading takeover lawyer—Martin Lipton, a founder of the takeover specialist law firm of Wachtell Lipton Rosen & Katz—and two prominent legal academics—Judge Frank Easterbrook and Dean Daniel Fischel of the University of Chicago Law School. Writing from inside “the target’s boardroom,” Lipton argued the ordinary business judgment rule should apply to takeover defenses, in which case they would normally be upheld, absent evidence of gross negligence or self-dealing.¹⁰⁹ Easterbrook and Fischel took a diametrically opposed position, arguing that directors should respond passively to takeover bids and that courts should presume defenses illegal.¹¹⁰

Each side’s position on defenses was a function of their views on takeovers. Lipton argued that hostile bids are disruptive and costly for targets, and that coercive bids harm shareholder interests. In addition, Lipton argued that bids often exploit stock market mispricing, that asset bust-ups

106. See Roberta Romano, *A Guide to Takeovers: Theory, Evidence and Regulation*, 9 YALE J. ON REG. 119 (1992) (reviewing literature of 1980s); Coates, *Critique*, *supra* note 23 (surveying empirical evidence from 1980s and 1990s).

107. E.g., Martin Lipton & David A. Katz, *Teamsters Union Proposes Alternative to Rights Plan*, Client Memorandum (Dec. 21, 1995) (criticizing proposed “blooming preferred” on grounds that it would “disenfranchise many shareholders and impair the liquidity of a company’s common equity”). See also Martin Lipton, *Corporate Governance in the Age of Finance Corporatism*, 136 U. PA. L. REV. 1, 59-69 (1987) (proposing as part of reform package a prohibition on staggered boards and supermajority vote requirements).

108. See *infra* Part III.B.

109. Lipton, *supra* note 10, at 120-24.

110. Easterbrook & Fischel, *supra* note 9, at 1194-1203.

that follow takeovers cause unnecessary and socially harmful layoffs, and that threat of bids reduces investment in good long-run projects.¹¹¹ Easterbrook and Fischel argued that takeovers are generally good because they produce immediate profits for target shareholders, transfer assets to those who value them most, and improve social welfare.¹¹² Most importantly, threat of bids reduces the agency costs between shareholders and managers, costs exacerbated by collective action problems facing dispersed shareholders of large public companies.¹¹³ The exacerbation in company-level agency costs theoretically caused by defenses remains at the center of the legal and economic policy debates on takeovers, defenses, and their regulation.

By themselves neither Lipton's nor Easterbrook and Fischel's arguments provide much help in understanding why companies would adopt varying numbers and types of takeover defenses at the IPO stage. Standing alone, Lipton's position would suggest all companies should adopt defenses prior to an IPO, and Easterbrook and Fischel's position would suggest that no firm should adopt a defense; yet in reality many do and many do not.¹¹⁴ To explain variation in pre-IPO defenses, more fine-grained theory is needed.

B. Company-Level Theories Justifying Some Defenses

Takeover defenses have received partial support from legal commentators such as Bebchuk,¹¹⁵ Gilson,¹¹⁶ and Coffee,¹¹⁷ and economists such as Stein,¹¹⁸ Shleifer and Summers,¹¹⁹ and (implicitly) Demsetz¹²⁰ and

111. Lipton, *supra* note 10, at 120-24.

112. Easterbrook & Fischel, *supra* note 9, at 1168-74.

113. *Id.*

114. See *infra* Part IV. See also Daines & Klausner, *supra* note 8, at 96 tbl.2; Field, *supra* note 8, at 26. The mismatch between first-generation theory and data is unsurprising, since both theories were less positive explanations of firm behavior at the IPO stage than normative positions (albeit with embedded positive claims) that were taken up to influence legal policy on midstream defenses.

115. Lucian A. Bebchuk, *Toward Undistorted Choice and Equal Treatment in Corporate Takeovers*, 98 HARV. L. REV. 1693 (1985) [hereinafter Bebchuk, *Undistorted Choice*]; Lucian A. Bebchuk & Lars Stole, *Do Short-Term Objectives Lead to Under-or Overinvestment in Long-Term Projects*, 48 J. FIN. 719 (1993); LUCIAN A. BEBCHUK, A RENT-PROTECTION THEORY OF CORPORATE OWNERSHIP AND CONTROL (Harvard Law School Working Paper No. 260, 1999) [hereinafter BEBCHUK, CORPORATE OWNERSHIP].

116. Ronald Gilson, *Seeking Competitive Bids Versus Pure Passivity in Tender Offer Defense*, 35 STAN. L. REV. 51 (1982).

117. John Coffee, *Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance*, 84 COLUM. L. REV. 1145 (1984).

118. Jeremy Stein, *Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior*, 104 Q.J. ECON. 655 (1989); Jeremy Stein, *Takeover Threats and Managerial Myopia*, 96 J. POL. ECON. 61 (1988).

119. Andrei Shleifer & Lawrence H. Summers, *Breach of Trust in Hostile Takeovers, in CORPORATE TAKEOVERS: CAUSES AND CONSEQUENCES* 33 (Alan J. Auerbach ed., 1988) (takeovers may facilitate breach of implicit contracts to protect investments in firm-specific human capital, and permit wealth transfers from employees to bidders).

Grossman and Hart.¹²¹ Most commentators have explicitly or implicitly acknowledged that defenses can harm shareholders by increasing agency costs, but, they have argued defenses may also play a valuable role after a bid has emerged (ex post justifications), and may also have valuable effects in anticipation of bids (ex ante justifications). Such benefits may be anticipated at the time of an IPO, and may thus explain the adoption of defenses.

1. *Ex post Theories: Bargaining Power*

Once a bid has come in, defenses may increase target shareholder welfare by solving collective action problems, impeding coercive bid tactics, enabling more bid competition, and allowing target boards to act as bargaining agents for target shareholders and thus to extract a larger share of the gains that successful bids generate.¹²² Target shareholders are typically dispersed and rendered largely passive by collective action problems.¹²³ Managers who are loyal, or whose incentives to entrench themselves are constrained (by some combination of stock compensation, independent directors, blockholders, and capital and labor markets), can in theory use delay imposed by defenses (and the threat of pursuing alternative

120. Harold Demsetz, *The Structure of Ownership and the Theory of the Firm*, 26 J.L. & ECON. 375 (1983). Demsetz focused not on defenses but ownership structure, such as the decision by a pre-IPO shareholder to retain a majority of voting stock, and argued that ownership structure is "an endogenous outcome of a maximizing process in which more is at stake than just accommodating to the shirking [agency cost] problem." *Id.* at 377. See also Harold Demsetz & Kenneth Lehn, *The Structure Of Corporate Ownership: Causes And Consequences*, 93 J. POL. ECON. 1155 (1985) (focusing on ownership structure as endogenous to firm characteristics).

121. Grossman & Hart develop a model in which dual class capital structures are endogenous to private benefits of control and liquidity constraints, among other things. Sanford Grossman & Oliver Hart, *One Share-One Vote and the Market for Corporate Control*, 20 J. FIN. ECON. 175 (1988). Bebchuk suggests defenses can be a weaker form of concentrated ownership structure, and should be analyzed as solving a general optimization problem involving more than minimizing agency costs. BEBCHUK, *CORPORATE OWNERSHIP*, *supra* note 115, at 31-36.

122. Bebchuk, *Undistorted Choice*, *supra* note 115; Lucian A. Bebchuk, *The Pressure to Tender: An Analysis and a Proposed Remedy*, 12 DEL. J. CORP. L. 911, 917-31 (1987); Elazar Berkovitch & Naveen Khanna, *How Target Shareholders Benefit from Value-Reducing Defensive Strategies in Takeovers*, 45 J. FIN. 137, 137 (1990); Gilson, *supra* note 116, at 51; Rene Stulz, *Managerial Discretion and Optimal Financing Policies*, 26 J. FIN. ECON. 3 (1990); Harry DeAngelo & Edward M. Rice, *Antitakeover Charter Amendments and Shareholder Wealth*, 11 J. FIN. ECON. 329 (1983); Jonathan R. Macey, *The Legality and Utility of the Shareholder Rights Bylaw*, 26 HOFSTRA L. REV. 835, 841-53 (1998).

123. Hostile bids may also create a "pressure to tender," which can (in theory) cause shareholders to accept a bid below their private valuation of the target, and bidders can increase that pressure by using two-tier bid structures, as infamously done by T. Boone Pickens in the 1980s. See *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946 (Del. 1985). But see Robert Comment & Gregg Jarrell, *Two-Tier and Negotiated Offers: The Imprisonment of the Free-Riding Shareholder*, 9 J. FIN. ECON. 283 (1987) (blended value of two-tier bids is equivalent to premiums in any-or-all bids, aggregating friendly and hostile in each case). "White knights" (that is, bidders other than the initial hostile bidder) may also be willing to pay more than a given hostile bidder, but may need time to investigate the target or complete financing, and defenses may buy that time, allowing target shareholders to increase their gains from the sale of the target. Coates, *Index*, *supra* note 26.

transactions) to negotiate for a higher price from a hostile bidder on behalf of target shareholders.¹²⁴ These ex post justifications, referred to henceforth collectively as the “bargaining power theory” for brevity, could explain why some firms adopt defenses before going public.¹²⁵

2. *Ex ante Theories: Myopia and Private Benefits of Control*

Distinct from bargaining power theory are theories built on different types of market failure that propose benefits that defenses may achieve by deterring bids.¹²⁶ First and prominent in the late 1980s were concerns about the effects of uncertainty and asymmetric information on stock market efficiency.¹²⁷ Stock market efficiency may be impaired either for all companies

124. Another ex post justification is that bids are disruptive and costly, and may encourage rent-seeking, and pills may be less harmful than either transactional defenses that target managers might use if pills were banned or the heavy court oversight that might be necessary to draw the line between harmful and beneficial transactions that could function as defenses. Atreya Chakraborty & Richard Arnott, *Takeover Defenses and Dilution: A Welfare Analysis* (July 1997) (Working Paper, on file with author).

125. Auction opponents point out that increasing target shareholder gains at the expense of the bidder is a pure transfer—bidders lose what targets gain—and so (in a static utilitarian framework) has no welfare consequences. Worse, argues Alan Schwartz, reducing a bidder's gains ex post reduces the number of bids ex ante, and so increases agency costs. Alan Schwartz, *Search Theory and the Tender Offer Auction*, 2 J.L. ECON. & ORG. 271 (1986). See also Easterbrook & Fischel, *supra* note 9; Frank Easterbrook & Daniel Fischel, *Takeover Bids, Defensive Tactics, and Shareholder Welfare*, 36 BUS. LAW. 1733 (1981). Auction justifiers reply that increasing target shareholder returns lowers the cost of capital and produces indirect social gains, and that bidder-to-target-shareholder transfers will not have a significant effect on bid incidence, because bidder profits from prebid toeholds often outweigh costs of bid search and commencement. Bebchuk, *Undistorted Choice*, *supra* note 115. In addition, increasing evidence suggests that bidders often if not usually overpay, MARK SIROWER, THE SYNERGY TRAP: HOW COMPANIES LOSE THE ACQUISITION GAME 147 tbl.A.1 (1997), due to hubris, the winner's curse, or buy-side agency problems. Richard Roll, *The Hubris Hypothesis of Corporate Takeovers*, 59 J. BUS. 197 (1986); RICHARD THALER, THE WINNER'S CURSE 50-62 (1992); Bernard S. Black, *Bidder Overpayment in Takeovers*, 41 STAN. L. REV. 597, 624-26 (1989); Randall Morck et al., *Do Managerial Objectives Drive Bad Acquisitions*, 45 J. FIN. 31 (1990). Bids may also be induced by the prospect of monopoly rents (despite antitrust laws), or by distortions arising from tax law. Steven Kaplan, *Management Buyouts: Evidence on Taxes as a Source of Value*, 44 J. FIN. 611 (1989). Thus, it is not certain whether increasing the number of bids will produce social gains.

126. Defenses may also facilitate relations between companies and factor markets (also known as “nonshareholder constituencies”) where complete contracts are infeasible or costly. Managers, employees, creditors, customers, and suppliers make company-specific investments—in human capital (managers and employees), financial capital (creditors), or fixed assets (suppliers and customers)—that are not fully protected by explicit (legally enforceable) contracts. E.g., Shleifer & Summers, *supra* note 119; Margaret Blair & Lynn Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999), reprinted in 24 J. CORP. L. 751 (1999); John Coffee, *Stockholders Versus Managers: The Strain in the Corporate Web*, 85 MICH. L. REV. 1 (1986); Ronald Giammarino et al., *Defensive Mechanisms and Managerial Discretion*, 52 J. FIN. 1467 (1997). Adequate empirical proxies for company-specific capital are hard to identify, and none seem capable of distinguishing defenses adopted to protect company-specific capital from defenses adopted to protect private benefits. Thus, the company-specific capital theory seems nontestable, and should perhaps be viewed as a more general version of a private benefits theory.

127. Stein, *Efficient Capital Markets*, *supra* note 118, at 454-59. Even if stock markets are “informationally efficient,” meaning that investors cannot on average outguess market prices using public information, they may not do a good “fundamental” job of pricing target companies. See Jeffrey

by market-wide distortions caused by fads, bubbles, and informational cascades, or for individual companies engaged in difficult-to-value projects. In some instances, mispricing can be corrected only if companies make disclosures that would harm the firm (for example, by giving away competitively sensitive information). If mispricing and myopia are substantial, apparent increases in shareholder wealth from premium takeover bids may be overstated: at best bids would sometimes represent costly rent-seeking, and at worst apparent premiums could mask inefficient transfers of value from target shareholders to bidders. Takeover defenses can reduce the risk that opportunistic bids at prices below target companies' true value will succeed or even be made. Alternatively, to ward off bids, target managers may maximize short-term share prices, reducing long-run value by foregoing hard-to-value projects.¹²⁸ Bebchuk and Stole formally show that in companies where the level of investment in research and development ("R&D") or capital expenditures ("capex") is unverifiable, some net present value projects will not be undertaken; by contrast, in companies where the productivity of R&D-capex is unverifiable, some negative net present value projects may be pursued.¹²⁹ Defenses can reduce pressure on target managers to maintain the highest possible short-term share price, and thus improve long-run performance.

A second *ex ante* theory explaining takeover defenses, one that received little attention in debates of the 1980s, takes two distinct forms, both focusing on benefits that flow from controlling a company. First are theories in which pre-IPO shareholders simply value control at an idiosyncratically high level.¹³⁰ Tastes for control of a company may vary: entrepreneurs may place special value on companies they create, and long association can create attachments making control, with assurance of continued association, uniquely valuable to an individual. Companies that in-

N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information and Securities Research*, 60 N.Y.U. L. REV. 761, 786-97 (1985); Donald L. Langevoort, *Theories, Assumptions and Securities Regulation: Market Efficiency Revisited*, 140 U. PA. L. REV. 851, 912-20 (1992); Stephen F. LeRoy, *Efficient Capital Markets and Martingales*, 27 J. ECON. LIT. 1583 (1989); William K.S. Wang, *Some Arguments That the Stock Market is Not Efficient*, 19 U.C. DAVIS L. REV. 341, 375 (1986).

128. Stein, *Takeover Threats*, *supra* note 118, at 62. See also Charles R. Knoeber, *Golden Parachutes, Shark Repellents, and Hostile Tender Offers*, 76 AMER. ECON. REV. 155 (1986). Shareholders that are themselves firms (for example, mutual funds) may also be imperfectly monitored by their own shareholders, and may be managed for short-term profits rather than portfolio firm value.

129. Bebchuk & Stole, *supra* note 115.

130. Neoclassical economic theory models companies as anonymous black-box production functions, valued solely for their ability to generate wealth, which, assuming "complete markets," can be used to buy whatever shareholders desire. ANDREU MAS-COLELL ET AL., *MICROECONOMIC THEORY* 153-57 (1995) (stating that traditional microeconomic theory views firm "merely as a 'black box,' able to transform inputs into outputs," but noting that "If prices . . . depend on the production of the firm, the objective of the owners may depend on their tastes as owners"). Thus, idiosyncratic valuation of companies is absent. Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 11 J.L. & ECON. 1 (1969). But complete markets do not exist, and consumers with enough wealth may value companies differently.

volve multiple generations of a family (as with Ford Motor) may also make control a unique good for members of that family.

Second are theories that stress the wedge that usually exists between the value of a firm to passive shareholders and the value of control of the firm to a controlling shareholder.¹³¹ Even if Arthur Sulzberger, the controlling shareholder of the *New York Times*, places no idiosyncratic value on being the one person with authority over the content of the paper, whatever value that authority has cannot feasibly be shared with outside shareholders.¹³² Ownership of sports teams, entertainment companies, vineyards, and cigar companies all plausibly offer private benefits that are (second-best) efficient for controllers to retain and harvest, rather than to attempt to share or forego.¹³³

In either version of private benefits theory, a controller will be inclined to retain a "control lock" (keep control wholly "noncontestable") by selling less than 50% of the common stock, or by splitting votes and ownership in a dual-class or pyramidal structure.¹³⁴ This is especially likely where private benefits are large relative to shared benefits. But as Bebchuk notes, at a lower level of private benefits, a controller may do best by allowing takeover bids but making them more costly by adopting defenses.¹³⁵

C. *Reconciling Traditional Theories with Variation in Defenses*

By their terms, the ex ante justifications just discussed apply more to some companies than to others. Private benefits of control vary by owner and company, and although market-wide myopia might make some defenses generally optimal, the difficulty of valuing a firm using public information is likely to vary by industry, life-cycle stage, and business strategy. In either case, defenses will (all else equal) be more valuable for some companies than for others.

131. See John C. Coates IV, "Fair Value" as a Default Rule of Corporate Law: *Minority Discounts in Conflict Transactions*, 147 U. PA. L. REV. 1251, 1273-77 (1999).

132. In many, perhaps most cases, private benefits taken from a company by a controller reduce by an equal or greater amount the "shared benefits" of ownership (dividends, resale value, liquidation payments), and allowing private benefits to be harvested is thus often inefficient ex ante, and companies have an incentive to make credible commitments to minimize them. *Id.* at 1313-27. But at times, the costs to pre-IPO owner-managers of committing not to harvest private benefits will outweigh gains from doing so. BEBCHUK, CORPORATE OWNERSHIP, *supra* note 115, at 31-36; Demsetz, *supra* note 120, at 377.

133. See Demsetz & Lehn, *supra* note 120, at 378-79.

134. BEBCHUK, CORPORATE OWNERSHIP, *supra* note 115, at 31-36; see also Grossman & Hart, *supra* note 121, at 179-80; Milton Harris & Artur Raviv, *The Design of Securities*, 24 J. FIN. ECON. 255, 266-67 (1989).

135. BEBCHUK, CORPORATE OWNERSHIP, *supra* note 115, at 31-36. For example, a control lock may exacerbate agency costs more than its expected value in protecting private benefits. Alternatively, wealth and liquidity constraints may be large enough to prevent a controller from pursuing profitable opportunities requiring outside capital unless she is willing to go public without a control lock, but not so large as to prevent the controller from making takeovers difficult by adopting defenses.

On their face, by contrast, *ex post* justifications apply to all companies: if more bargaining power provides a net benefit, defenses should be useful for all firms. However, when one considers the negative effect of defenses on value, the expected increase in agency costs caused by reducing the threat of takeover, the empirical picture is more complicated. If agency costs vary among companies, as they probably do, then that variation combined with the bargaining power theory, could make it optimal for some companies and not others to adopt defenses. Likewise, if the number or size of premium bids varies by firm or industry in a predictable way, then different companies could make different assessments of the net cost or benefit of defenses on bid incidence and outcomes. Thus, *ex post* justifications, too, predict that (all else equal) a subset of companies (those with high agency costs or little need for bargaining power) will be better off adopting fewer defenses.

IV

TESTING THEORIES OF DEFENSES AT THE IPO STAGE

Together, Parts II and III suggest a number of predictions about the types of variables that should correlate with the choice of takeover defenses by IPO companies. Table 1 collects the explanatory and control variables to be tested, the expected effect in the level of defenses adopted (that is, the sign of the coefficient predicted by the hypotheses to which they relate), and summarizes the results obtained in the multivariate regression described in Part IV.I. The remainder of Part IV will specify the hypotheses that will be tested, define and explain the variables to be used in the tests, describe the sample and data sources, and then present results.

TABLE 1
THEORIES, VARIABLES TESTED, PREDICTED SIGNS, AND RESULTS

Variable	Law Firm Hypotheses	Banker Hypotheses	Agency Costs	Bargaining Power	Market Myopia	Private Benefits of Control	Results
M&A experience of law firm	+						+
Law firm identity	+/-						+/-
Law firm location	+/-						+/-
Law firm size	+/-						+/-
Recent industry-level M&A activity	+			-			+
Delaware company	+						+
Company / offer size	+		-	-			+
Company age	+		-			+	+
Venture capital backing	+	-		-	-		+
Development stage	-			-	+		-
Unit offering	-						-
Underwriter quality	+	+/-					+

*A. Law Firm Hypotheses**1. Takeover Proficiency*

Most straightforwardly, takeover defense adoption should correlate with whether corporate counsels have takeover proficiency. (This is true whether defenses are generally good or bad for pre-IPO owner-managers: if good, the correlation should be positive; if bad, negative.) As noted in Part II, many firms with takeover proficiency do not have IPO proficiency, and vice versa. However, some firms have significant business in each practice area; to the extent these firms show up in an IPO sample, the companies they advise should generally exhibit higher levels of takeover defense.

Public rankings of lawyer takeover proficiency per se do not exist.¹³⁶ Thus, two new measures of takeover- or merger-related proficiency at a given law firm were constructed for this Article. First, the number of M&A transactions on which a given law firm is primary deal counsel to one of the parties should provide a good measure of M&A proficiency. M&A and takeover proficiency do not perfectly coincide. The vast majority of M&A transactions involve privately held companies invulnerable to hostile takeover bids, so lawyers who specialize in M&A can have flourishing practices without ever working on hostile bids. Still, M&A and takeover proficiency overlap, and the vast majority of the dollars involved in M&A are concentrated in public company deals that involve some hostile takeover risk. M&A lawyers (as with many people) tend to be more attracted to dollars than particular types of work.

A second measure of takeover proficiency is to index law firms by their takeover-related litigation experience. Takeovers, after all, are heavily litigated, and although court rulings and newspaper reports publicize many aspects of such cases, there is no better way to gain takeover-related legal experience than to fight a takeover battle. Because of the speed and complexity of such lawsuits, and in contrast to the compartmentalized way that lawyers normally function, takeover law proficiency is not compartmentalized within litigation departments of M&A law firms; corporate lawyers typically work in close company with litigators during the lawsuits, developing litigation and deal strategy together, going to court, and critiquing briefs and motion papers. Spillover effects, in other words, should be common between takeover litigation and deal advisory proficiency. If a given law firm is frequently named as counsel in cases involving takeover

136. Rankings of firms active in M&A existed in the early 1990s, but only for top twenty M&A firms in a given year. In contrast to the investment bank pecking order, which is consistent year to year, particularly within client industries, fewer than ten law firms appear in the top twenty each year. Thus, the correlation coefficient between MASDC (see Appendix C for a definition) and the M&A Top 20 rankings for 1990 from *Corporate Control Alert* is modest (.20); if M&A Top 20 rankings are replaced with a dummy variable set to one if a firm appears in the top twenty, the coefficient rises to .76.

or M&A law, one would expect, all else equal, the firm to develop an expertise in advising clients on that law.

2. *Law Firm Identity*

To the extent law firms rely on boilerplate developed internally, one should expect the identity of the IPO companies' corporate counsels to correlate with the level of takeover defenses adopted by those companies. To the extent such firms also have takeover proficiency, the direction of the correlation is clearly positive, but for firms without (much) proficiency, the direction of the correlation is less clear: it may be that some firms without proficiency are self-conscious about this fact, and borrow boilerplate from firms with takeover proficiency (meaning a positive relationship should show up); other firms may not only lack takeover proficiency, but may out of ignorance, inattention, or hubris not realize this fact, and simply maintain internal boilerplate with few defenses (causing a negative relationship). Further complicating matters is the fact that few law firms have a large enough market share of the IPO advisory business for firm-level correlations to show up at statistically significant levels for law firms as a whole. If exceptions exist, they are likely to be very large firms like Skadden Arps and firms prominently associated with start-up companies like Wilson Sonsini in Silicon Valley and Hale & Dorr in Boston.

3. *Law Firm Location*

Law firms relying on borrowed boilerplate are also likely to exhibit geographic correlations.¹³⁷ Law firms that are closer to each other in physical proximity are more likely to share information, either formally (by sharing documents or experiences), or by lateral hiring, or by conscious borrowing from large, locally prominent law firms with high IPO market shares (Silicon Valley law firms are likely to look to Wilson Sonsini; smaller New York law firms are likely to look to Skadden Arps or Sullivan & Cromwell) or via common counterparties (particularly accountants, investment bankers, or VCs). In any event, more geographically proximate

137. Since New York law firms are more numerous and may be more diverse in size and nature of practice, geographic effects might be less pronounced for lawyers based in New York. New York retains the largest share of large firms, large firm revenue, and large firm profit, see *The AmLaw 100 Profits Per Lawyer, By City*, AM. LAW., July 1999, at 123-25 (breaking down nation's largest 100 law firms by headquarters ("HQ") location), but its share of large firms has fallen from more than half to less than a quarter since the 1960s, see GALANTER & PALAY, *supra* note 52, at 48. New York also has very small generalist law firms representing the "other hemisphere" of the profession (individual clients), making it as or more diverse on size and practice dimensions than other locales. In race and gender diversity, however, it lags: in a 500+ firm sample 1980-90, New York had fewer women and minority lawyers, both associates and partners, than Chicago, Los Angeles, or the District of Columbia. Elizabeth Chambliss, *New Partners with Power? Organizational Determinants of Law Firm Integration* 70 (1992) (unpublished dissertation, University of Wisconsin) (on file with author).

law firms are more likely to think of one another as salient sources of public company boilerplate.¹³⁸

Geographic concentrations of law firms are likely when economic activity is geographically concentrated, and economic concentrations may be sustained or stimulated by geographically concentrated legal practices.¹³⁹ In the 1980s, "almost half of [Silicon Valley's] venture capitalists maintain[ed] offices in a single office building in Menlo Park."¹⁴⁰ Law firms were, as late as 1960, exclusively local.¹⁴¹ Ample anecdotal evidence exists of high-profile (and presumably well-regarded and competent) New York law firms and investment banks establishing offices in Silicon Valley, Moscow, Prague, London, and other remote locations in an attempt to build practices that they had failed to build from their home locations.¹⁴² The fact that such efforts are made is evidence that physical proximity matters, notwithstanding the Internet and the fax.

Once established,¹⁴³ economic concentrations will tend to generate (or be sustained by) law firm networks that share information and develop

138. Suchman, *supra* note 52, at 106, quotes a junior partner at a Silicon Valley law firm as saying "other Silicon Valley law firms . . . often [have] adopted our forms or vice versa." In addition to direct borrowing, geographically proximate firms may have similar clients with similar needs, but resulting contract or defense similarity would then be caused by client type or contracting need and not law firms themselves. Controls for geographic location, industry, size, and so on, of clients are included in multivariate models tested in Part IV.

139. Recent work contrasts Silicon Valley and Boston's high-tech community on Route 128. See Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128 and Covenants Not to Compete*, 74 N.Y.U. L. REV. 575, 580-86 (1999) (reviewing literature); ANNALEE SAXENIAN, *REGIONAL ADVANTAGE* 1-9 (1994) (contrasting adaptation of Silicon Valley firms to international competition in 1980s with unsuccessful efforts by Route 128 firms; arguing divergence caused by "differences in productive organization," such as density of social networks, openness of labor markets, and degrees of specialization, hierarchy and secrecy, that affect rate of "collective learning and flexible adjustment . . . experimentation and entrepreneurship").

140. SUCHMAN, *supra* note 52, at 24, 29. See also WILLIAM D. BYGRAVE & JEFFRY A. TIMMONS, *VENTURE CAPITAL AT THE CROSSROADS* 240 (1992) (noting concentration of VC funds in Silicon Valley).

141. See GALANTER & PALAY, *supra* note 52, at 23, 47 ("In 1960 big law firms were clearly identified with a specific locality, as they had been since the origin of the big firm.").

142. Such branches could be established by new offices or by merging with existing firms in the new locale. *Id.* at 47 ("by 1980, of the 100 largest firms, 87 had branches"); Karen Dillon, *Brand Names at the Brink*, AM. LAW. (May 1995), at 5 (reporting that 12% of Sullivan & Cromwell lawyers work in six foreign offices; 10% of Davis Polk lawyers work in five foreign offices); TROTTER, *supra* note 44, at 204 ("Cravath . . . is the only law firm among the sixty largest in the U.S. with only one U.S. office"). Even law firms as close to Silicon Valley as San Francisco found it necessary to open offices in Palo Alto to compete with Wilson Sonsini and other law firms in Santa Clara County. SUCHMAN, *supra* note 52, at 35, 120-21 (quoting interview subject, a lawyer at a Palo Alto office of a San Francisco law firm, as saying "here, in 1991, the guys in San Francisco still didn't understand how a business deal is struck in the Valley").

143. Silicon Valley's growth, fueled by proximity and interchange with Stanford University, was famously rapid: "As recently as 1950, [Silicon Valley] . . . touted itself . . . as 'the Prune Capital of America,'" SUCHMAN *supra* note 52, at 6. Less known are roles played by (1) the Department of Defense, NASA, and Lockheed, see EVERETT M. ROGERS & JUDITH K. LARSEN, *SILICON VALLEY FEVER: GROWTH OF HIGH-TECHNOLOGY CULTURE* 39, 269 (1984); SAXENIAN, *supra* note 139, at

network-specific norms and standard practices. In the VC financing stage, for example, Silicon Valley lawyers use "cookie cutter" forms into which they "cram" deals that do not completely fit.¹⁴⁴ Geographically standardized arrangements concentrate activity still further: Silicon Valley lawyers interviewed by Suchman, for example, contrasted the small amount of argument or negotiation with one another over venture capital finance agreements with the way that "lawyers in other parts of the country . . . go crazy over a lot of stuff that would just draw a yawn from a Silicon Valley lawyer."¹⁴⁵ Geographically standardized practices may also work to "creat[e] socially constructed barriers to entry that prevent [nonlocal] lawyers . . . from effectively competing for [local] business."¹⁴⁶ Geographically proximate law firms will tend to think of other local firms as their most dangerous competitors, and thus be more interested in keeping up with what the others are doing. The result is that (perceived) best practices will be more readily copied within geographic localities.

4. *Law Firm Size*¹⁴⁷

Since larger law firms have broader clienteles and are capable of supporting more intensively specialized lawyers,¹⁴⁸ they should have more takeover proficiency for IPO lawyers to draw upon. Even if sharing of proficiency within firms is difficult, it seems likely to be less difficult than sharing proficiency between firms, on average. Thus, larger law firms should tend to include more defenses, on average.

At very small levels (one-to ten-person law firms), smaller law firms may exhibit more consistency in the defenses their clients adopt than within larger law firms, simply because the same people will handle all of a firm's deals, and will be likely use their own deals as precedent. Beyond that relatively small size, however, larger law firms as a class should exhibit more correlations within themselves than smaller firms as a class,

20-27 & 178 n.38 (1994) (positing two reasons for Silicon Valley's growth: (1) defense and NASA contracts, with Lockheed alone employing over 12,000 in Santa Clara County by 1964; (2) interchange of biotech specialists with University of California at San Francisco), see SUCHMAN, *supra* note 52, at 20; and (3) federal tax, pension and securities legislation that stimulated VC funds in Silicon Valley, see BYGRAVE & TIMMONS, *supra* note 140, at 24-66 (describing legal changes 1978-81, rising market share 1978-88 of VC limited partnership funds, favored in Silicon Valley, relative to small business investment corporations).

144. SUCHMAN, *supra* note 52, at 99-106.

145. Mark C. Suchman & Mia L. Cahill, *The Hired Gun as Facilitator: Lawyers and the Suppression of Business Disputes in the Silicon Valley*, 21 L. & Soc. INQUIRY 679, 701-02 (1996).

146. Bernstein, *supra* note 57, at 253.

147. On the rapid growth of law firms through 1990, see GALANTER & PALAY, *supra* note 52, at 40-46 (observing that 100+ lawyer firms grew from less than 12 in 1960 to 251 in 1986; largest firms grew faster than the legal profession as a whole; "market share of the fifty largest law firms doubled" from 1972 to 1986); 1990 ABA SURVEY, *supra* note 44, at 1-12 (reporting that lawyers in 60+ lawyer firms grew from 12% in 1984 to 21% in 1990).

148. LAW FIRM MANAGEMENT, *supra* note 40, § 1.4.1, at 1:30.

because they will be more likely to develop internal boilerplate. Larger law firms are also more likely to have policies requiring or strongly encouraging lawyers to use those internally created forms in their individual practices.

5. *Reincorporation to Delaware*

One last law firm effect may be caused by reincorporation. Nearly all companies choose either Delaware or their home (headquarters) state as their state of incorporation. Put otherwise, Delaware is the only state in which companies choose to reincorporate when they are about to go public. For such companies, the need to draft a new charter and bylaws that comply with Delaware law may prompt greater effort by the company counsel to review firm defenses. At a minimum, it will often prevent company counsel from simply carrying forward private company boilerplate into the IPO documents. Thus, companies incorporated in Delaware will tend to have more defenses, not because Delaware default law imposes more defenses, but because the lawyers involved are more likely to do a better job on defenses as part of the IPO process.

B. *Constraints on Law Firm Effects*

Law firm effects should be mitigated by other variables that proxy for whether IPO companies have direct or indirect access to alternative sources of legal proficiency. These alternatives may constrain or modify company counsels' choice of takeover defenses. In particular, high levels of M&A activity in a given company's industry prior to an IPO will increase the salience, and make both managers and other IPO participants more aware, of takeover risk. Assuming defenses are optimal or neutral, M&A activity in a company's industry should make companies more likely to adopt defenses. Likewise, larger, older, less speculative, more profitable companies with pre-IPO shareholders that are sophisticated (for example, VC funds) should have better access to independent legal advice. Assuming, again, that defenses are optimal or neutral for all companies, but not all lawyers know this, fewer defenses should be observed at companies that are smaller in size, are younger, engage in unit offerings, are owned by individuals, have less prestigious lead underwriters, and have lower earnings at the time of the IPO. Conversely, more defenses should be observed at companies that are VC-backed if VCs are aware that defenses are good for pre-IPO owner-managers.

C. *Alternative Hypotheses and Control Variables*

Drawing on theories described in Part III, the following additional correlations are tested, both as alternative hypotheses, and as controls on the law firm hypotheses.¹⁴⁹

1. *Banker Hypotheses*

If defenses are uniformly good or bad, and the only reason that companies do adopt or exclude defenses is because some bankers are falling down on the job of informing companies about the effect of defenses on IPO pricing, one would expect to see defenses correlate with the quality of underwriters. If there is a price penalty for defenses, then better quality underwriters should correlate with fewer defenses, on average. On the other hand, if there is no price penalty (so that defenses are good from the perspective of pre-IPO owner-managers), then better quality underwriters should correlate with more defenses.¹⁵⁰

2. *Company-Level Agency Costs / Bargaining Power Hypotheses*

Bargaining power theory provides a reason for all companies to adopt defenses, and company-level agency cost theory provides a reason for all companies not to adopt them. But in each case, these reasons may be stronger at some companies than at others so that, together, they could explain defense variation. Defenses might be efficient at companies where the incremental agency costs created by defenses are lower than the value of bargaining power at some companies, but inefficient at other companies.

Higher company-level agency costs can be expected to exist where companies have higher levels of cash flow and free cash flow, since disloyal manager-agents are able to misinvest the cash more readily than other types of assets.¹⁵¹ Company-level agency costs are also likely to be higher at older and larger companies, which are more mature and more likely to be the “cash cows” that can be prime candidates for managerial slack.

149. What follows are not theories but alternative hypotheses. Thus, these hypotheses do not necessarily represent my own beliefs or expectations about the determinants of defenses; they are an attempt to extract the implications of traditional theories about the effects of defenses and recast those implications into plausible and testable hypotheses, so as to provide a check on the law firm hypotheses. The fact that some of the specific alternative hypotheses are in tension with one another, or with the law firm hypotheses, should be viewed as a virtue. The goal is to let the data resolve these tensions, rather than forcing a resolution with logic or armchair empiricism alone.

150. One might also expect that sophisticated pre-IPO shareholders, such as VC funds, would be more likely to know of any price penalty that defenses impose on an IPO, and (since they are not themselves control shareholders) to resist defenses more strongly than other pre-IPO shareholders if such a price penalty exists. *But see* Black & Gilson, *supra* note 61, at 257-64 (suggesting VCs informally precommit to give up control even if doing so reduces “exit” value of their investment, which would eliminate or overwhelm any such correlation).

151. Michael C. Jensen, *Takeovers: Their Causes and Consequences*, 2 J. ECON. PERSP. 21, 21 (1988) (describing the relationship between free cash flow and agency costs).

Conversely, company-level agency costs are likely to be lower at companies with more debt. In each case, defenses should be inversely correlated with the proxy for company-level agency costs: fewer defenses at companies with more cash flow and companies that are older and larger, more defenses at companies with more debt. Agency costs also vary by industry; if this variation is large relative to other factors, defenses should also vary by industry. Finally, some theorists predict that companies with more defenses will be managed less diligently, so that companies with more defenses would have lower returns on equity or assets.

Turning to the use of defenses to create bargaining power, any extra value that such bargaining power provides should vary with the time a target would need to develop alternatives to a bid, as well as how much competition exists for the target regardless of defenses.¹⁵² Some company characteristics may make hostile takeovers more difficult, providing some companies with natural bargaining power, and making defenses less valuable.¹⁵³ For example, high levels of debt impede "bootstrap" bids, high levels of shareholder dispersion impede proxy fights, and hostile takeovers in high-tech or people-specific industries are more difficult, because (as is commonly said among merger lawyers) their "assets walk out the door each night." Defenses may thus be less valuable at companies with high leverage,¹⁵⁴ high shareholder dispersion, and VC-backing, as well as companies in "high-tech industries," or in the development stage (that is, before shipping product).

3. *Market Myopia Hypothesis*

Because myopia theory relies on the existence of private information, it may be impossible to test dispositively. Nevertheless, the theory suggests that defenses may be more important for companies that are hard to value. High levels of planned capital expenditures or research and development expenditures might make a company harder to value, whereas high levels of fixed assets (property, plant, and equipment) might make a company

152. Together, the Williams Act, Proxy Rules, and poison pills impose a minimum of thirty to sixty days delay on all bids for U.S. public companies, allowing bid competition to emerge.

153. Daines & Klausner, *supra* note 8, at 98-99, suggest increases in bargaining power are most value-enhancing when bid activity is otherwise low, and use M&A activity in a company's industry in the five years around the IPO as a measure of this activity. They find a positive correlation between industry-M&A and defenses, leading them to reject the bargaining power hypothesis. *Cf. infra* Part V (suggesting alternative interpretation of similar finding). However, industry-M&A may not be a good proxy for the expected value of bargaining power from defenses, as industry-M&A can shift dramatically over time. See Mark L. Mitchell & J. Harold Mulherin, *The Impact of Industry Shocks on Takeover and Restructuring Activity*, 41 J. FIN. ECON. 193, 207 (1996) ("50% of the takeovers in [any] given industry [during the 1980s] clusters within a two-year period").

154. On the one hand, as just noted in the text, if leverage is an important constraint on company-level agency costs and if defenses increase those costs, leverage should correlate positively with defenses. On the other hand, if leverage instead makes targets less attractive to bidders, they will make bargaining power less important, and so correlate negatively with defenses.

easier to value (at least when inflation is low and interest rates and fixed asset prices are stable). Companies are on average harder to value if they are in high-tech industries, or are in either the development stage or the growth stage (after sales have begun, but before they turn profitable), since their value is in the future, and there are fewer guides for valuation.¹⁵⁵ Such companies should have more defenses if myopia theory is correct.

4. *Private Benefits of Control Hypotheses*

As with myopia, the existence of private benefits is by definition difficult to test. For “psychic” private benefits, possible empirical proxies include whether the CEO founded the company, the CEO’s tenure with the company, whether the company is named after the CEO or a major ongoing shareholder, and whether the company is owned by an individual or a family.

Private benefits of whatever kind are unlikely to motivate defense adoption if the CEO is using the IPO to sell shares (as opposed to using it to dilute her ownership by raising more equity capital), since CEO sales may signal an intent to retire or sell out entirely in the near future. Where private benefits of control are sufficiently high, owners may elect to retain a “lock” on control, so that takeover defenses become less important. Ownership structures that allow for such a “lock” may thus be substitutes for defenses. If so, fewer defenses are expected at companies with dual class capitalization, or where pre-IPO shareholders retain more of the voting stock after the IPO.

Where executives own fewer shares prior to the IPO, they may be less able to choose defenses to maximize their private benefits, since non-executive shareholders are likely to insist on a structure that maximizes shared benefits. IPOs with VC-backing, lower levels of CEO ownership, or higher levels of independent director ownership would thus have fewer defenses. Finally, nonpsychic private benefits (of a certain type) may vary with company industry. In particular, Field finds a strong correlation between dual class capitalizations in the printing, publishing, and communications industry.¹⁵⁶ If dual class capital structures are chosen to protect such private benefits, then (controlling for dual class structures) one would expect more defenses at companies in industries in which dual class capitalizations are more common (“dual class industries”).

155. Dawn Farber, *Cerent: The \$6.9 Billion Question* 46, 51 (April 2000) (unpublished manuscript, on file with author); *Finding Ways to Profit from Internet Ventures: How Goldman Values Internet Firms*, CRAIN’S N.Y. BUS., June 15, 1998, at 12; Suchman & Cahill, *supra* note 145, at 683-90 (detailing uncertainty of valuing technology firms).

156. Field, *supra* note 8, at 19. Combining industry data from Compustat with analysis of data on dual class capitalizations from IRRIC, I was able to confirm Field’s findings for the broader group of mature public companies making up the Standard & Poor’s 1500. *See also* Demsetz & Lehn, *supra* note 120, at 1162 (reporting similar findings regarding media firms and sports teams).

D. Description of Sample

The main sample began with 180 public companies chosen randomly from companies that completed firm commitment IPOs during 1991 and 1992 (120 from 1991, and 60 from 1992). In each case the IPOs were reported by *Going Public: The IPO Reporter*, which prior to 1998 regularly published a comprehensive annual list of firm commitment underwritten IPOs during the previous year. *Going Public* also identifies IPOs of closed-end investment companies and real estate investment trusts, and because such organizations have qualitatively different business and governance structures, those IPOs were excluded. For similar reasons, three limited partnerships in the original sample were excluded, leaving 162 companies. The final sample represents 17% of the roughly 1000 ordinary business corporations that went public during those years, and 14% of the roughly 1200 total IPOs. Dependent and independent variables determined for the main sample are described next, followed by summary statistics, mean comparisons, and univariate analysis, and finally a multivariate regression analysis. To confirm and update some of the Article's findings, a separate sample of 162 randomly chosen IPOs from the first nine months of 1998, and a smaller sample of 33 IPOs, were randomly chosen from all 1999 IPOs tracked by the Securities Data Corporation ("SDC").¹⁵⁷

E. Dependent Variables

For each company, data on company-specific governance terms were gathered from a review and analysis of each company's prospectus, charter, bylaws, and (in a few cases) the terms of the securities issued. Each company was required to file those documents with the SEC.¹⁵⁸ In a few cases, companies failed to make required filings of charters or bylaws, or appear to have filed incomplete or outdated versions. In such cases, review of the IPO prospectus and subsequent filings on Forms 10-Q or 10-K were made to obtain the correct documents, with two companies for which filings were unavailable being excluded from the sample, leaving 160 companies. Charter amendments at sample companies from the date of the IPO

157. The 1998 sample was taken from Lapushchik, *supra* note 8, at 15-16, who randomly chose her sample from Hoover's Online. The 1999 sample was randomly taken from IPO-Alert, at <http://www.alert-ipo.com> (visited 10/24/00). Hoover's and IPO-Alert are online commercial services that track public companies. In each case, IPOs were excluded if they involved foreign companies or banks, limited partnerships, or real estate investment trusts; IPOs were also excluded from the 1998 sample if they did not have at least one mutual fund investor on December 31, 1998.

158. Since 1994 (and before that for some large firms), SEC filings have been made available online via the SEC's EDGAR system. Information for EDGAR Filers, at <http://www.sec.gov> (last visited Sept. 28, 2001). However, most firms that became public companies prior to 1994 have never refiled their charters or bylaws, so such documents are not available via EDGAR, and only occasionally available through databases in widespread use such as LEXIS. Pre-EDGAR documents can be obtained from the SEC via commercial services, but only at a nontrivial per-firm cost; charters, but not bylaws, are typically available from the firm's state of incorporation, and only at a nontrivial cost.

to the present were reviewed.¹⁵⁹ Some data were unavailable for some companies, leaving fewer observations in some regressions.

1. *Governance Terms Affecting Takeover Vulnerability*

Each company's documents were reviewed for whether the company had adopted any or all of ten variable governance terms relevant to takeover vulnerability, as listed on Appendix A. Each term was coded in a dummy variable, indicating whether the term was included, affirmatively excluded, or not addressed in the company's documents. In addition, the location of each term (charter or bylaws) was noted. State corporate law was analyzed for each state in which a sample company was incorporated, and default law on the ten relevant terms was coded. Together, the company-specific governance variables and the default law variables provide a large percentage of the information necessary to analyze the sample companies' structural takeover defenses.

2. *Contestability Index*

As I have discussed elsewhere, empirical research on takeover defenses has to date provided limited useful information.¹⁶⁰ Among other failings, prior research has not attempted to systematize defenses to arrive at a unified measure of legal takeover vulnerability, but instead has either studied defenses on a defense-by-defense basis (and so did not control for defense interactions), or aggregated defenses in a theoretically unmotivated way (introducing high levels of noise). To provide consistency with prior research, this Article reports summary data using a term-by-term approach, with emphasis on the two single defenses that have the greatest impact on takeovers (classified boards and dual class capital structures). It also uses those specific defenses as dependent variables in alternative models to check the robustness of the base model. But the focus of the Article is on a new dependent variable—called the “contestability index,” or “CI”—which is constructed from individual governance terms and is offered as a better measure of legal vulnerability to takeover than any one term alone (or any simple aggregation of terms).

The contestability index is complicated, such that a full description of how it works is deferred to Appendix B.¹⁶¹ Briefly, the contestability index is composed of (1) governance variables and (2) an algorithm that maps those variables onto a numerical index that equals the number of days

159. Bylaw amendments are of less concern than charter amendments because shareholders retain the ability to amend bylaws in all of the jurisdictions in the sample. The charter, by contrast, may not be amended without board approval in any state. Bylaws thus enter into the contestability algorithm only where firms restrict shareholders' ability to amend the bylaws in the charter.

160. See Coates, *Critique*, *supra* note 23, at 281.

161. See also Coates, *Index*, *supra* note 26, at 23-59 (providing full description of the contestability index).

necessary for a majority shareholder coalition to replace a majority of the board. Governance terms used in the index are determined as discussed above. Where documents are silent, default law is analyzed to supply missing terms. Together, this analysis establishes four things: (a) the normal procedure for shareholders to elect directors, (b) the procedures (if any) that shareholders have to short-circuit the normal process, (c) the procedures (if any) that shareholders have to change any of the foregoing rules, and (d) any constraints on the board's ability to block tender offers with a poison pill.

Analysis of these rules for a given company will indicate a "shortest path" for a majority shareholder coalition to replace the target's board. The most intuitive "shortest path," the way someone not familiar with corporate law might expect the process of director election to work, is simply for the shareholders to wait until their next, regular annual meeting and to elect a majority of the board at that meeting. In fact, this is the "shortest path" at only a small subset of companies, and even for these companies the time until the next regular meeting can vary substantially depending on where the company is incorporated and when in the calendar year the effort to replace the board begins.

But for a majority of companies, shareholders can "act early" through one of two routes: they can call a special meeting, or they can act by written consent in lieu of a meeting. At most of these companies, shareholders can also stage a "coup" by removing the current board, or "pack" the board by expanding it, and in either case filling the resulting vacancies with directors nominated by or friendly to a bidder. At many companies, bylaws that on their face might restrict these "shortest paths" can themselves be changed by shareholders.

At another subset of companies, those with effective staggered boards, shareholders must be willing to wait through two election cycles to replace a majority of directors. Many companies that have staggered boards, however, are vulnerable to "coups" of the sort just described, whether via "early action" or at a regular shareholders' meeting. A small subset of companies with staggered boards also have cumulative voting provisions that enable managers to retain a lock on control for two to three years. Finally, another small subset of companies have implicitly prohibited poison pills, so that a proxy fight is not necessary: a takeover may be accomplished by tender offer with the minimal delay imposed by the Williams Act.¹⁶²

The contestability index should remedy several limitations of prior research. The fundamental point is that defenses function primarily by imposing delay on hostile bids, which both decreases their expected benefit

162. 15 U.S.C. §§ 78m(d)-(e), 78n(d)-(f) (1994).

for the bidder and increases the time a target has to seek alternative bids.¹⁶³ By focusing on delay caused by different terms, the index extracts from governance terms those features that have both an actual and highly variable effect on takeovers at different companies, and disregards those terms (for example, fair price provisions) that have effects (for example, deterrence of two-tier bids) that are duplicated by other terms (for example, poison pills, control share statutes),¹⁶⁴ and also disregards events (such as pill adoptions) that in themselves have little effect on a company's takeover vulnerability.¹⁶⁵ In addition, the index captures the way governance terms affecting takeovers interact.¹⁶⁶ A company's full complement of terms can make takeovers both harder and easier than a single term would imply. The index reflects those interactions and provides significantly improved information about the legal vulnerability to takeover of the companies in the sample.

F. Explanatory and Control Variables

Basic IPO data, including the offering's lead manager, size and date, were taken from *Going Public*, and confirmed from the companies' SEC filings. Some IPO characteristics—such as law firm identity, and location;¹⁶⁷ director and officer ("D&O") ownership; pre-IPO shareholder ownership retention; firm and legal age; development-stage status; and CEO compensation, age, and tenure; and whether the CEO founded the company—were gathered from IPO prospectuses. Sponsorship by VC or LBO funds was taken from annual lists of IPOs published in *Venture Capital Journal* and *Buyouts*, respectively, and confirmed from the companies' SEC filings. Ownership by individuals or families and corporate parents

163. For a discussion of why delay is so crucial to hostile bids, see Coates, *Index*, *supra* note 26, at 11-23.

164. See Coates, *Critique*, *supra* note 23, at 320-25.

165. *Id.* at 318-20. An alternative to the contestability index is to develop a ranking of defenses for use in an ordered logit model, as done by Daines & Klausner, *supra* note 8. See *infra* Part IV.I & Appendix C.

166. Coates, *Critique*, *supra* note 23, at 325-28.

167. Lawyer location and size were coded both at office and firm levels. That is, data were gathered on (1) where lawyers primarily responsible for a given IPO were located, based on information in the issuer's registration statement filed with the SEC for the IPO, and how many lawyers were located in that office, and (2) where the largest office of each law firm was located, and the number of lawyers in the firm as a whole, using information from the National Association of Law Placement, or, where NALP did not include a firm, from Martindale-Hubbell. For location, law firm office is hypothesized to have a larger effect than headquarters, based on likely information flows among lawyers in a given office and the relative autonomy of separate teams of corporate lawyers. For size, total firm size is hypothesized to have a larger effect than office size, as capital resources and costs and benefits of standardization of IPO documentation seem more likely to be determined by the size of a firm as a whole. Data reported reflect those hypotheses unless otherwise noted.

(that is, splitoffs or equity carve-outs) was obtained from prospectuses.¹⁶⁸ Carter-Manaster rankings of underwriter prestige were taken from Carter, Dark, and Singh.¹⁶⁹ For more precise definitions of explanatory variables, see Appendix C. Pre-IPO financial data were obtained from the companies' IPO prospectuses, and post-IPO financial data were taken from COMPUSTAT. Post-IPO ownership structure was obtained from company proxy statements filed with the SEC, and post-IPO charter amendments were obtained from filings on Forms 10-K and 10-Q.

Data on law firm size and law firm locations were taken from annual directories published by the National Association of Law Placement, Martindale-Hubbell, Inc., and Harvard Law School's Office of Career Placement. As empirical proxies for law firm takeover proficiency, three simple, new indices were constructed.¹⁷⁰ First, to focus on M&A experience that plausibly requires takeover proficiency, law firms were indexed by a variable called MASDC, which is the number of transactions in a subset of SDC's M&A database for the three-year period (1988-90) prior to the IPO sample period for which a given law firm acted as counsel to one of the principal parties to the deal. To focus on deals that involve some risk of a hostile "bust-up" bid, deals were included only if they involved majority acquisitions of public companies that lack controlling shareholders ($n=1131$). The second and third indices (SUITSALL and SUITSDEL) use appearances in merger or takeover-related litigation in the period preceding the IPO. A Lexis search was conducted, in Delaware and all state courts in the period 1980-90, for any of the following words or phrases: merger, acquisition, takeover, tender offer, or proxy fight. Duplicate cases were excluded. The results were two numbers, which proxy for a law firm's M&A-litigation experience for the period prior to the IPO sample period.

168. Selection of defenses may be distorted by parent-level agency problems when the company going public is owned by an existing public company, so corporate parentage is controlled for in the model.

169. Carter et al., *supra* note 98, at 285.

170. In addition to the constructed law firm indices, law firm rankings were taken from *Corporate Control Alert* (for top M&A firms), *American Lawyer* (for firms with the highest revenues per lawyer and profits per partner), and *Going Public* (for top IPO firms). *July 1991 Ranking Chart*, CORPORATE CONTROL ALERT, July 1991, at 3 (ranking law firm participants in M&A transactions announced between January and June 1991); *January 1992 Ranking Chart*, CORPORATE CONTROL ALERT, Jan. 1992, at 3 (ranking law firm participants in M&A transactions announced between July and December 1991); *AmLaw 100: America's One Hundred Highest Grossing Law Firms in 1990*, AM. LAW., July-Aug. 1991, Special Pullout Section, at 1 (listing law firms with highest revenues per lawyer and profits per partner); *Top 20 Lead Underwriters Counsel for IPOs and Top 20 Issuer Controls for IPOs*, GOING PUBLIC: THE IPO REPORTER, Mar. 1992, at 5 (ranking law firms by market share and number of initial public offerings). Regression results for those variables, not reported, were qualitatively the same as for the constructed law firm indices.

Standard industrial classification ("SIC") codes were obtained from the companies' SEC filings on Form S-1.¹⁷¹ Three-digit SIC codes are also used to construct a proxy variable for recent industry-level M&A activity: all mergers and acquisitions involving public targets with market capitalization of at least \$10 million in the three-year period prior to the sample IPOs were analyzed, and transactions were counted for each target's 3-digit SIC code, producing an index of recent industry-level M&A activity ("MAINDACT").¹⁷²

G. Descriptive Data

1. The Companies

Table 2 gives a general sense of the kinds of companies going public in the early 1990s. Many small, unknown, and development-stage high-tech companies can be found, particularly in the biotech industry. DNX planned to insert human DNA into mice to turn them into hemoglobin factories. Embrex was developing a method to allow chickens to be vaccinated in the egg, a tiny labor savings but one that could be leveraged over six billion chickens hatched each year in the U.S. But the sample also includes large, well-known, and mature companies. The Equitable, an insurance company, used its IPO to convert from mutual to stock ownership, and remains one of the fifty largest companies in the world; CompUSA has become the country's largest computer retail chain; and Danskin is a long-established and well-known maker of women's exercise clothing. The sample is distributed among seventy-six different three-digit SIC groups and thirty-eight two-digit SIC groups. Sizeable clusters (10 or more companies) are found in a few industry groups, with more than 10 companies in only three industries: health services, medical instruments, and electronics.

171. SIC codes present difficulties. There are an insufficient number of firms per 4-or 3-digit code to use SIC codes as controls, 2-digit codes are so broad in scope as to be of little use for firm-level analysis, and many firms engaged in related businesses are scattered through multiple 2-digit codes.

172. This is similar to the approach taken by Daines & Klausner, *supra* note 8, at 98-99. Also, friendly and hostile deals were both counted, as friendly deals are often quasi-hostile. See G. WILLIAM SCHWERT, *HOSTILITY IN TAKEOVERS: IN THE EYES OF THE BEHOLDER?* (Nat'l Bureau of Econ. Research, Working Paper No. W7085, 1999), available at <http://papers.ssrn.com/> (noting that friendly deals are often quasi-hostile). Because recent industry-level M&A activity seems more likely to increase the salience of takeover risk, and hence manager attention to defenses, than it is to affect the expected efficiency of defenses as bargaining tools, industry counts were not scaled (that is, divided by industry size): high levels of large-deal activity attract attention from managers regardless of whether it is a large percentage of industry assets or firms. In unreported regressions, however, qualitatively similar results were obtained with scaled industry counts.

TABLE 2
COMPANIES GOING PUBLIC IN THE EARLY 1990s

Company	Description of Business	Use of Proceeds	Stage
Equitable	Insurance	Convert to Stock Form	Mature
Duracell	Battery Manufacturing	Reverse LBO (KKR)	Mature
Danskin	Women's Exercise Clothing and Hosiery Designer	Reduce Debt	Mature
CompUSA	Computer Retail Chain	Fund Rollout	Growth
EZCorp	Second Largest Operator of Pawnshops in the United States	Fund Growth	Growth
Pharmchem	Examine "175,000 urine specimens" Per Month For Illegal Drug Use	Fund Growth	Growth
Osteotech	Process Human Bone for Nonprofit Donation Agencies	R&D	Development
Embrex	Vaccinate Eggs to Cut Labor Costs (6 Billion chickens/year in US)	R&D	Development
DNX	Put Human DNA Into Mice to Create Hemoglobin Factories	R&D	Development
Regeneron	Treatments for Alzheimer's, Parkinson's, Lou Gehrig's Diseases	R&D	Development

Set forth in Table 3 are summary financial and operational data on companies in the sample. The typical company was founded (often as a partnership or unincorporated entity) in 1983 and incorporated (or reincorporated) in 1986, making the median company nine years old at the IPO,

with a "legal age" of five.¹⁷³ By 1999, seven or eight years later, about one-third (31%) had been acquired, and another 3% had gone bankrupt.¹⁷⁴

Most IPO companies were small, with median assets of \$21 million.¹⁷⁵ At the IPO, fixed assets comprised about half of total assets, and most companies were barely profitable, with median earnings of \$0.6 million. In contrast, median earnings rose significantly to \$2.3 million in the first year post-IPO. The median company had 350 employees, little working capital, and only \$4.5 million in long-term debt, and raised proceeds of \$24 million in the IPO. Stock was sold to a median 415 shareholders, with pre-IPO shareholders retaining on average 64% of the votes.¹⁷⁶

Over the next five years, most companies remained barely profitable, with median earnings of \$0.4 million and negative average free cash flow. Over that period, the median company spent \$4.3 million per year on capital expenditures, invested \$400,000 per year in R&D, and generated an ROA of 1% and an ROE of 5%.¹⁷⁷ About a third of the sample, however, produced high earnings and threw off significant levels of free cash flow. Most of these were equity carve-outs or reverse LBOs. Examples include International Specialties Products, with average annual earnings of \$61 million and free cash flow of \$39 million, and Interstate Bakeries, with average annual earnings of \$35 million and free cash flow of \$60 million. But a few "pure" IPOs also generated sizeable earnings and cash flow in the five years post-IPO. Examples included Broderbund Software (\$16 million of earnings and \$21 million of free cash flow), and Marquette Electronics (\$13 million of annual earnings and \$15 million of free cash flow). Thus, it remains plausible that variation in free cash flow might explain variation in defenses.

173. Prior researchers report IPO firm age. *See, e.g.,* Field, *supra* note 8, at 5 (reporting average firm age of eighteen and median age of eight in IPOs 1988-92); Wayne Mikkelsen et al., *Ownership and Operating Performance of Companies that Go Public*, 44 J. FIN. ECON. 281, 285 tbl.1 (1997) (reporting median firm age of five in IPOs 1980-83); Jay Ritter, *The Long-Run Performance of Initial Public Offerings*, 46 J. FIN. 3 (1991) (reporting average firm age of thirteen and median of six in IPOs 1975-84). Still, it is often ambiguous whether the data refers to original founding of the company's principal line of business ("firm age") or the (re)incorporation of a legal entity going public ("legal age"), or some mix of the two. SEC rules do not require or specify rules for disclosure of this datum. Legal age is often (much) lower, especially for reverse LBOs or equity carve-outs, and even first-time IPOs recently reorganized in anticipation of the IPOs, but firm age is itself often ambiguous, as business lines shift over time and can be bought or sold without formal change to a legal entity.

174. *Cf.* Field, *supra* note 8, at 46 tbl.11 (finding 16% of IPOs acquired in five years and 18% in seven years); Mikkelsen et al., *supra* note 173, at 286 (finding 24% of IPOs acquired in five years and 36% in ten years). Varying overall M&A activity alters M&A hazard rates in a fixed post-IPO period.

175. Average company size was much larger because of outliers such as The Equitable.

176. *See* Field, *supra* note 8, at 32 tbl.1 (finding similar results).

177. *Cf.* Mikkelsen et al., *supra* note 173, at 292 tbl.3 (reporting ROA of 3% over five years post-IPO for 283 IPOs 1980-83).

TABLE 3
SUMMARY FINANCIAL AND OPERATIONAL DATA ON SAMPLE COMPANIES

Variable	Percent Positive	Median	Mean
Founded		1983	1973
Incorporated		1986	1983
Offering Size (\$MM)		\$24.00	\$49.30
% Votes Retained by Pre-IPO Owners		65%	64%
% Votes Owned by D&O Post-IPO		42%	40%
% Votes Owned by CEO Post-IPO		8%	15%
Splitoff (equity carve-out)	9%		
Reverse LBO	19%		
Venture Capital Backing	35%		
Individual/Family Ownership	32%		
No. of Shareholders (1 yr post-IPO)		415	8737
CEO Age at IPO		48	49
CEO Tenure at IPO		6	8
CEO Founded Company	48%		
Firm Uses Owner Name	6%		
Development Stage at IPO	23%		
Unit Offering	11%		
Earnings (1 yr pre-IPO) (\$MM)	65%	\$0.56	\$22.09
Total Assets (1 yr pre-IPO)		\$21.17	\$917.21
Working Capital (1 yr pre-IPO)		\$3.81	\$33.26
Long-Term Debt (1 yr pre-IPO)		\$4.63	\$113.06
Earnings (1 yr post-IPO)	66%	\$2.26	\$12.95
Total Assets (1 yr post-IPO)		\$40.76	\$1,020.84
Cash on Hand (1 yr post-IPO)		\$7.82	\$54.57
Fixed Assets (1 yr post-IPO)		\$9.93	\$207.27
Earnings (5 yr avg post-IPO)	54%	\$0.42	\$12.54
Free Cash Flow (5 yr avg)	32%	(\$2.75)	(\$0.40)
Buybacks (5 yr avg)	52%	\$0.00	\$5.29
Capex (5 yr avg)	95%	\$4.30	\$47.61
R&D (5 yr avg)	50%	\$0.04	\$11.34
ROE (5 yr avg)		4.8%	(21.7%)
ROA (5 yr avg)		1.1%	(15.3%)

TABLE 3 (CONT'D)
SUMMARY FINANCIAL AND OPERATIONAL DATA ON SAMPLE COMPANIES

Variable	Percent Positive
<u>Incidence of Takeover Defenses</u>	
Dual Class Capitalization at IPO	11%
Dual Class to Maintain Control	8%
Classified Board	34%
Cumulative Voting	13%
Blank Check Preferred	86%
Implicit Ban on Pills	4%
Coup Possible	83%
Classified Board Avoidable	18%
Clear Gaffe (ex. Failed Cl. Boards)	10%
<u>Company Headquarters</u>	
California	21%
Delaware	1%
New York	10%
Massachusetts	8%
<u>State of Incorporation</u>	
Delaware	62%
California	8%
Massachusetts	4%
New York	3%
<u>Company Counsel Location</u>	
New York City	30%
Boston	11%
California	19%
Silicon Valley	6%
Same as company	58%
Out-of-state	42%
<u>Out-of-state Law Firm Location</u>	
New York	51%
Massachusetts	12%

2. *The CEOs*

Table 3 also presents data on the CEOs of the sample companies. The average CEO was forty-eight years old at the time of the IPO and had eight years of experience at the company; about half (48%) of the companies were founded by the person who was CEO in the IPO. A few (6%) named their companies after themselves.¹⁷⁸ About 8% of CEOs sold stock and saw their proportionate stakes in their companies decline as a result of the IPO; the vast majority maintained or increased their voting power and equity ownership.

3. *The Law Firms*

The sample confirms that, as with legal services generally,¹⁷⁹ the market for corporate legal services in IPOs is highly fragmented: 160 companies turned to 111 different law firms for legal advice on one of the most important transactions in a company's life-cycle. The top ten law firms in the sample accounted for less than a third of the sample. Only one (Wilson Sonsini) captured more than five percent of the sample IPOs; and no law firm captured more than 10%. Table 3 shows that sample law firms are geographically concentrated in New York City (30%), California (including Silicon Valley) (19%), and Boston (11%), and about a quarter are scattered throughout the U.S. Most law firms (58%) are located in the same state as the company they advise, and more than half of the rest (51%) are located in New York City.¹⁸⁰ California law firms do not capture a large share of out-of-state company IPOs.

At the IPO, corporate counsel ranged in size from two-lawyer shops to the Jones Day and Skadden Arps behemoths, each with more than 1000 attorneys. Still, as Figure 1 shows, most firms were large: the median firm had 214 attorneys, and the particular office working on the IPO had 131. Nearly half (47%) were in *American Lawyer's* AmLaw 100 for 1991 (based on gross revenues).¹⁸¹ Since then, sample law firms have grown slowly to a median of 162 lawyers in 1998, or about 5% a year. In the early 1990s, many law firms laid off attorneys and retrenched, consistent with average slow growth over the decade.¹⁸² By 1998, twelve (8%) sample law

178. See Field, *supra* note 8, at 32 tbl.1, 39 tbl.7 (making similar findings).

179. See *supra* note 97 and accompanying text.

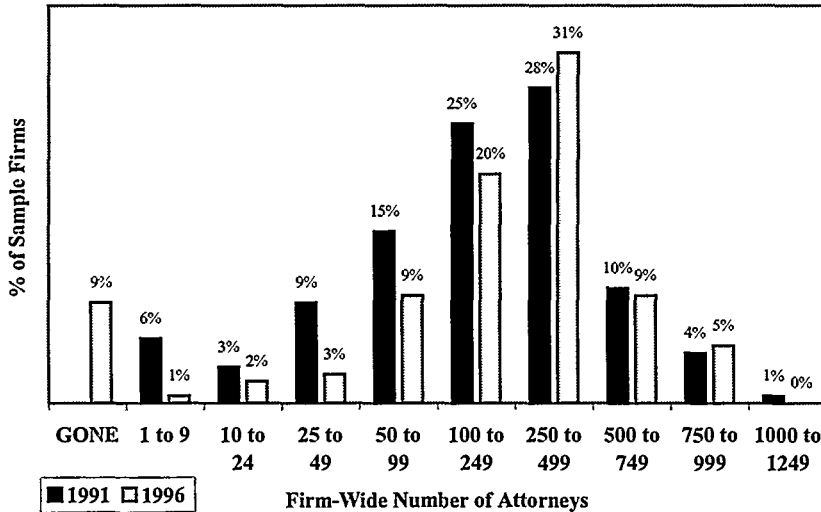
180. Other locations where law firms captured more than 5% of the out-of-state company sample are Boston (12%), Washington, D.C. (6%), Texas (6%), and Chicago (5%).

181. Of those in the AmLaw 100 (for which the top rank is 1 and the bottom is 100), the median rank (based on revenues per lawyer) was 66.

182. LAW FIRM MANAGEMENT, *supra* note 40, § 1.3.4, at 1:24 ("[M]ajor firms in every market . . . reported sharply lower profits for 1990.").

firms had disappeared, ten by dissolution, two by merger into other law firms.¹⁸³

FIGURE 1: LAW FIRM SIZE
Distribution of Company Counsel in Sample of 1991-92 IPOs
in 1991 and 1996



Law firms in the sample worked on an average of twenty public target M&A transactions from 1988 to 1990, and litigated an average of forty-three reported M&A cases in all federal and state courts in the 1980s, including seven in Delaware courts. Those numbers are skewed by M&A-intensive Skadden, which in those periods alone worked on 186 public M&A deals and handled 325 M&A lawsuits, including eighty-six in Delaware courts. After the top decile, the M&A indices fall off rapidly; the median number of M&A deals is four, and the median number of M&A lawsuits is seventeen (including one Delaware case).

183. Fink Weinberger dissolved in 1993 after expanding into real estate in the late 1980s; Gaston & Snow dissolved in 1991 after mismanagement, defections, and insolvency; Johnson & Gibbs dissolved in 1995 after rapid growth in the 1980s, recession, layoffs, defections, and illness of the founder in the early 1990s; Townley & Updike dissolved in 1995 after Dorsey & Whitney hired away ten top rainmakers and merger efforts with Coudert failed. Other vanished law firms were: Cascone & Cole; Cohen & Cohen; Grayson Givner; Katz Karacic; McKenna & Fitting; Mandell & Zaroff; O'Connor Broude; and Trotter Smith (founded by TROTTER, *supra* note 44). Several handled more than one sample IPO, increasing the mortality rate reflected in Figure 2 to 9%. By comparison, Hildebrandt, Inc., reported in GALANTER & PALAY, *supra* note 52, at 55 n.120, found that 10% of midsize firms, making up 25% of firms at the time, dissolved or merged in just two years ending in 1988. One can infer either that law firms in the instant sample were larger than "mid-size" firms studied by Hildebrandt, or the 1990s were a more stable environment for law firms than the mid-1980s, or both.

TABLE 4
DEFENSES BY TOP LAW FIRMS IN SAMPLE

				Client Takeover Defenses			Takeover Expertise		
	1991 HQ	LAWFRM1	IPOs	Mean CI	CLASS	DUALCON	MASDC	SUITSALL	SUITSDEL
Wilson Sonsini	Palo Alto	214	9	50	0%	0%	12	2	1
Skadden Arps	New York	996	7	525	86%	29%	186	325	86
Brobeck Phleger	San Francisco	403	4	50	0%	0%	8	34	2
Hale & Dorr	Boston	280	4	330	50%	0%	9	43	1
Latham & Watkins	Los Angeles	607	4	190	50%	0%	34	52	4
Bachner Tally	New York	48	3	45	0%	0%	1	4	0
Cooley Godward	San Francisco	334	3	418	67%	0%	4	7	0
Kirkland & Ellis	Chicago	439	3	108	33%	0%	23	110	9
Morgan Lewis	Philadelphia	641	3	52	33%	0%	11	117	1
Sullivan & Cromwell	New York	387	3	163	100%	0%	143	130	10
Weil Gotshal	New York	597	3	49	0%	0%	71	161	18
Debevoise	New York	375	2	45	0%	50%	30	36	3
Simpson Thacher	New York	455	2	45	0%	0%	97	74	3
Willkie Farr	New York	343	2	55	0%	0%	28	47	2
Baker & Botts	Houston	431	1	45	0%	0%	8	71	10
Cahill Gordon	New York	222	1	695	100%	0%	40	103	10
Fried Frank	New York	371	1	605	100%	0%	101	116	13
Jones Day	Cleveland	1072	1	605	100%	0%	29	99	2
Kramer Levin	New York	124	1	45	0%	0%	10	54	4
Tenzer Greenblatt	New York	72	1	65	0%	0%	0	24	7

Definitions:

LAWFRM1: number of lawyers in 1991

IPOs: number of IPOs in sample

CI: contestability index (see Appendix B)

CLASS: classified board

DUALCON: dual class capital structure, low-vote stock sold to public in IPO

MASDC: number of public company M&A transactions 1988-90 in Securities Data Co.

SUITSALL: number of cases in Lexis 1980-89 with "merger, acquisition, proxy fight or tender offer"

SUITSDEL: number of Delaware cases in Lexis 1980-89 with "merger, acquisition, proxy fight or tender offer"

Table 4 lists the law firms that are in the top ten of the sample by number of sample IPOs and by indices of M&A deals and M&A litigation. Considerable overlap exists, so that fifteen firms fill out all thirty spots on the three top-ten M&A lists. Correlation coefficients exceed 0.85 for each pair of M&A variables. Sample law firms with high M&A indices predictably are mostly large New York firms (Skadden, Sullivan & Croninwell, Weil Gotshal), but geographic dispersion can also be seen, with law firms from Chicago (Kirkland & Ellis), Los Angeles (Latham), Cleveland (Jones Day), Houston (Baker & Botts) and Philadelphia (Morgan Lewis) showing up on one or more lists. Boston law firms are notably absent from the M&A top-ten lists.

4. *The Takeover Defenses*

In total, fifteen categories of governance terms were encountered (set out in Appendix A) and were coded in dummy variables (essentially “yes,” “no,” or “no choice”). Table 3 reports summary statistics on these terms.¹⁸⁴ Most companies adopted normal capital structures, with a single class of common stock having one vote per share, but eighteen (11%) adopted dual class structures. Of these, thirteen (8%) sold low-vote stock in the IPO, suggesting that the structures are intended to maintain a “lock” on control.¹⁸⁵ Blank check preferred, which enables poison pills to be adopted regardless of the number of authorized common shares not yet issued, was provided for by 86% of companies, and the number of authorized common shares was sufficiently large that pills could be adopted at an additional 10% of companies, leaving only 4% of companies with an implicit pill ban, and none with an explicit prohibition on pills.¹⁸⁶

After dual class structures, the single most significant structural defense (the classified board) was in place at the time of the IPO in 34% of the sample companies. Yet in most cases, IPO firms had mechanisms that would render any classified board moot. At 69% of companies, shareholders could remove directors without cause, and at 34% of companies, shareholders had the power to expand and “pack” the board, so that the takeover defense effects of roughly half of the classified boards in the sample (or about 18% of the full sample) were avoidable. At 70% of companies,

184. Not reflected are *sui generis* governance terms adopted by a small number (less than 5%) of firms that relate to their industry, ownership structure, or other factors. Thus, notwithstanding the near-total contracting freedom that firms theoretically have at their disposal, they rarely exercise it. This finding is consistent with arguments I and others have made elsewhere that transaction costs, signalling effects, and network externalities may substantially constrain choice of governance terms by firms. Coates, *Fair Value*, *supra* note 131, at 1295-1306.

185. Daines & Klausner, *supra* note 8, at 95-97 tbl.2, find dual class structures in 64% of IPOs 1994-97, and Field, *supra* note 8, at 7, 31 fig.1, finds dual class structures in 7% of IPOs 1988-92, and 5% of her sample have dual class structures and sell low-vote stock to the public.

186. Daines & Klausner, *supra* note 8, at 96 tbl.2, find blank check preferred in 95% of IPOs between 1994-97.

shareholders have the ability to either (or both): (a) act by written consent (51%) or (b) call a special meeting by a vote of less than a majority of shareholders (67%). Given that cumulative voting fell out of favor in the U.S. well before the sample period,¹⁸⁷ a surprisingly large 13% of companies chose to permit it (either expressly in their charters or by not reincorporating to one of the vast majority of states that permit or presume its elimination). Of those twenty companies, only two had classified boards (which as described in Appendix B can turn cumulative voting from a takeover vulnerability into a defense).

5. *Incorporation, Default Law, and Contestability Index*

To calculate a firm's legal takeover vulnerability, it is necessary to review not only the company's governance terms, but also the default corporate laws supplied by the twenty-three states where the companies were organized. Table 3 reports summary statistics on state of incorporation. Delaware was the choice of state of incorporation for 62% of public companies,¹⁸⁸ California was second with 8% of the companies, and no other jurisdiction was chosen by more than 5% of companies. Over 95% of companies incorporated in Delaware or their headquarters jurisdiction, whereas only one of the Delaware companies was actually headquartered in Delaware.

Data on governance terms were then combined with the contestability algorithm to compute an actual contestability index ("CI") for each company. The mean contestability index for the entire sample was 167, meaning it would require a minimum of 167 days to take over the average company. The lowest index in the sample was for companies with implicit pill bans (CI = 30), and the highest for those companies with effective staggered boards and cumulative voting (CI = 998). The most common CI

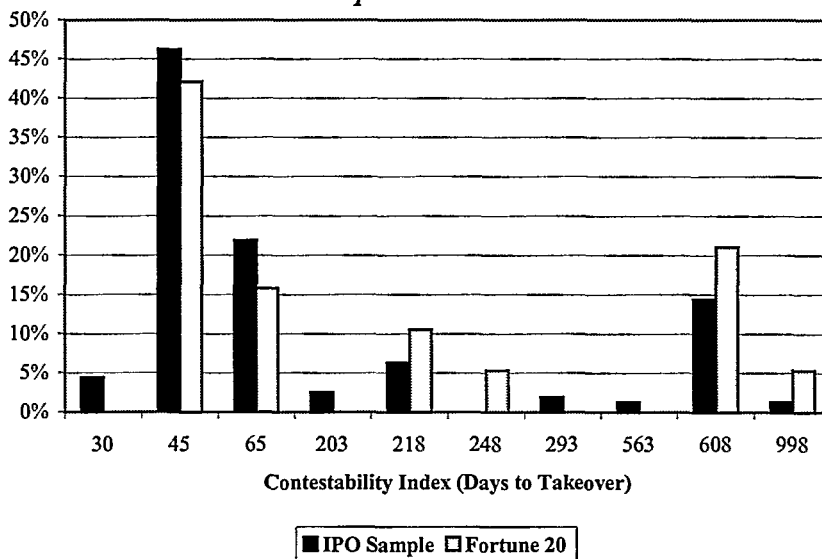
187. See generally Jeffrey N. Gordon, *Institutions as Relational Investors: A New Look at Cumulative Voting*, 94 COLUM. L. REV. 124, 145-46 (1994) (noting that mandatory cumulative voting was law in twenty-two states in the late 1940s, but was the default law in only six states and mandatory in none by 1992). For data on cumulative voting, see Sanjai Bhagat & James A. Brickley, *Cumulative Voting: The Value of Minority Shareholder Voting Rights*, 27 J.L. & ECON. 339 (1984) (reporting that 24% of NYSE firms had cumulative voting in 1982); CHARLES M. WILLIAMS, CUMULATIVE VOTING FOR DIRECTORS 66-69 (1951) (noting that in sixty-nine proxy fights 1943-48, 60% of targets had cumulative voting, and estimating that 40% of 2,900 total firms sampled had cumulative voting, most due to mandatory statutes, but 9% from voluntary choice); David Ikenberry & Josef Lakonishok, *Corporate Governance Through the Proxy Contest: Evidence and Implications*, 66 J. BUS. 405, 414 (1993) (reporting that in ninety-seven proxy contests 1968-87, 34% of targets had cumulative voting). Analysis of data from INVESTOR RESPONSIBILITY RESEARCH CENTER, CORPORATE TAKEOVER DEFENSES (1995 & 1997), shows that about 11% of the S&P 1500 and the 500 other large or high-profile firms tracked by IRRC had cumulative voting in 1997, but half of these firms also had classified boards, which can turn cumulative voting from a takeover vulnerability into a defense; as described in Appendix C, many of the remaining firms presumably had cumulative voting for a long time, and are unable to obtain shareholder approval to abolish it.

188. Field & Karpoff, *supra* note 8, at 37 tbl.3, find a similar 59% of their sample incorporate in Delaware.

was 45, and the distribution was left-skewed: the 25th percentile and the median of the distribution of the index were both 45, and the 75th percentile was 211.

Figure 2 groups companies into categories based on the index and shows the u-shaped distribution of overall legal takeover vulnerability for both the IPO sample and the largest public companies in the Fortune 20. As can be seen, most companies left themselves fairly vulnerable to a hostile takeover, but a significant minority (28%) installed substantial defenses. Because of the dichotomous character of most governance terms, CIs do not appear in a smooth distribution across the range of possible CIs, but instead cluster in five groups (with some variation within the clusters).

FIGURE 2: DISTRIBUTION OF DEFENSES
IPO Sample and Fortune 20



6. D&O Ownership, Retention, and Amendments

In an IPO, pre-IPO shareholders do not usually sell control; instead, on average, they retain a majority of the firm's stock. In the sample, the median stake sold is only 35%, with less than 25% of IPOs involving sales of 50% or more of the pre-IPO shareholders' stake.¹⁸⁹ Directors and officers ("D&Os") own a large percentage of the retained stake: the median post-IPO ownership by D&Os as a group, and by the CEO alone, were

189. Cf. Field, *supra* note 8, at 5-6 tbl.1 & 2 (observing that in 1,019 1988-92 IPOs, an average of 32% of voting shares sold, cutting median D&O ownership from 73% to 50%); Mikkelsen et al., *supra* note 173, at 287 tbl.2 (observing that in 283 1980-83 IPOs, average of 32% of voting shares sold, cutting median D&O ownership from 68% to 44%).

42% and 8%, respectively.¹⁹⁰ Because governance terms can generally be changed by majority shareholder vote, the retention of majority stakes by pre-IPO shareholders suggests that governance terms at the time of the IPO might not reliably be the governance terms that will apply in the future. Therefore, the terms may have no real effect on the takeover vulnerability of a firm. If true, this reasoning would suggest that companies would amend their governance terms following the IPO but before they sold down their majority stakes.

By the seventh year after the IPO, in contrast, median D&O ownership has fallen below 14%, and directors and officers own less than 20% of the company in two-thirds of the sample.¹⁹¹ Thus, the companies in the sample studied in this Article should have "fixed" their CIs well before the present. Nearly all of the companies amended their charters at least once after the IPO, primarily to increase shares of authorized capital stock. Less than 5% of the sample amended their charter so as to adopt meaningful new defenses that would alter their CI. Only seven (6%) of the 105 firms lacking classified boards at the IPO adopted classified boards in the seven years after the IPO.

H. Mean Comparisons and Univariate Regressions

Data on governance terms and the contestability index can be partitioned based on other variables, and the means compared as first tests of some of the theories described in Parts II and III. Summary data on partitions and related mean comparisons are shown in Table 5, and summary data on defenses installed by the specific top law firms in the sample are shown in Table 4.¹⁹² Univariate regressions are also used to supplement these comparisons as a preliminary step toward the multivariate analysis in Part IV.I.

1. Law Firm Identity and Location

At the most general level, law firm identity appears to affect defenses. One-way analysis of variance shows that mean contestability indices differ across law firms ($p < .01$). More detailed analysis is limited by the fact that law firms rarely serve more than once or twice as corporate counsel in the sample. The only exceptions are Skadden Arps (seven companies) and Wilson Sonsini (nine companies). Both appear to use boilerplate, but the two firms appear to use radically different suites of defenses.

190. Mikkelsen, Partch and Shah report that D&Os retain an average of 44% of the companies in their sample of 283 IPOs 1980-83. Mikkelsen et al., *supra* note 173, at 287 tbl.2.

191. *Cf. id.* at 288-89 tbl.2 (stating that after 5 years, about 5% of 283 IPOs 1980-83 have a majority shareholder, and 60% of directors are independent).

192. Mean comparisons are two-tailed t-tests with unequal variance.

TABLE 5
SUMMARY DATA ON PARTITIONS AND RELATED MEANS COMPARISONS

	Mean Contestability Index (see Appendix B)			Classified Board		Dual Class Control Structure	
	yes	no	t-test of means p-value	% positive	t-test p-value	% positive	t-test p-value
Splitoff (equity carve-out)	154.43	162.98	0.89	43%	0.48	7%	0.95
Reverse LBO	148.90	165.33	0.70	27%	0.38	7%	0.84
Venture Capital Backing	194.60	142.61	0.17	40%	0.18	5%	0.32
Family Ownership	144.35	170.60	0.48	22%	0.06	20%	0.00
Firm Uses Owner Name	109.30	165.92	0.35	20%	0.36	40%	0.06
CEO Founded Company	174.47	150.65	0.49	32%	0.90	8%	0.93
Development Stage at IPO	107.17	179.05	0.03	25%	0.26	11%	0.46
Unit Offering	55.76	175.46	0.00	12%	0.02	6%	0.74
<u>Company Counsel</u>							
Skadden Arps	525.00	165.16	0.02	71%	0.08	29%	0.28
Wilson Sonsini	68.33	187.77	0.00	22%	0.46	0%	0.00
Silicon Valley	51.67	168.86	0.00	11%	0.07	0%	0.00
California	141.67	167.01	0.56	23%	0.17	3%	0.22
<u>Company Incorporated</u>							
Delaware	187.69	121.31	0.06	38%	0.13	8%	0.71
California	45.41	171.76	0.05	0%	0.00	8%	0.92
RMBCA States (control provisions)	100.11	185.99	0.02	23%	0.06	7%	0.83
<u>Industry (3-digit SIC)</u>							
Drugs (283)	239.13		0.22	50%	0.19	6%	0.83
Computer Services (incl. software) (737)	265.21		0.14	43%	0.48	0%	0.00
Medical Instruments (384)	163.60		0.99	30%	0.83	0%	0.00
Holding Companies (671)	231.50		0.43	63%	0.14	13%	0.69
Health Services (809)	73.29		0.00	43%	0.64	0%	0.00
Computer Equipment (357)	50.00		0.00	20%	0.53	0%	0.00

TABLE 5 (CONT'D)
SUMMARY DATA ON PARTITIONS AND RELATED MEANS COMPARISONS

	Mean Contestability Index (see Appendix B)			Classified Board		Dual Class Control Structure	
	yes	no	t-test of means p-value	% positive	t-test p-value	% positive	t-test p-value
<u>Industry (3-digit SIC)</u>							
Restaurants (581)	189.20		0.81	60%	0.33	0%	0.00
Electronic Components (367)	98.25		0.20	0%	0.00	0%	0.00
Telephone Communications (481)	229.00		0.64	100%	0.00	0%	0.00
<u>Lead Underwriters (CM2)</u>							
Lehman Bros. (7.50)	177.40		0.84	30%	0.83	20%	0.35
Merrill Lynch (8.88)	250.50		0.28	60%	0.12	10%	0.80
Alex. Brown (8.88)	255.50		0.35	63%	0.14	0%	0.00
Goldman Sachs (9.00)	159.25		0.96	50%	0.39	13%	0.69
First Boston (9.00)	313.86		0.19	71%	0.08	14%	0.64
Kidder Peabody (8.83)	203.00		0.68	29%	0.79	14%	0.64
Montgomery (8.75)	126.14		0.66	29%	0.79	0%	0.00
Prudential (8.75)	203.71		0.70	43%	0.64	0%	0.00
Morgan Stanley (8.88)	262.33		0.40	50%	0.48	0%	0.00
PaineWebber (8.75)	118.50		0.38	17%	0.35	0%	0.00
Robertson (8.75)	48.33		0.00	0%	0.00	0%	0.00
			OLS		logit		logit
Top Ten Lead Manager Average	196.33		0.03	41%	0.02	7%	0.90
CM2 ¹⁹³			0.02		0.01		0.68

Bold indicates statistical significance at 95% level.

Six of Skadden's seven clients have classified boards, none permit shareholders to remove directors without cause, two have dual class control structures, and five have CIs of 605. (Recall that a CI of 605 means that shareholders must as a legal matter wait 605 days before being entitled to

193. See Appendix C.

replace a majority of the company's board; such a large CI greatly impedes proxy fights and, in the era of the poison pill, hostile bids generally.) In near-complete contrast, only one of the nine Wilson Sonsini clients has a classified board, all allow removal of directors without cause, none have dual class control structures, and six have CIs of 45. Companies advised by Skadden Arps have a mean CI of 525, well above the mean for any other partition tested; those advised by Wilson Sonsini, by contrast, have a mean CI of 50, well below the sample average of 180. A t-test and a Wilcoxon rank-sum test easily reject the hypotheses that the mean and median CIs for companies advised by the two firms are the same, or that the two firms make similar recommendations regarding classified boards or dual class capital structures ($p < .001$).¹⁹⁴

Consistent with the hypothesis that geographic networks of lawyers affect the legal advice they give, law firm effects generalize beyond Wilson Sonsini to the sample companies advised by other Silicon Valley-based lawyers.¹⁹⁵ Companies advised by Valley law firms have a mean CI of 52, compared to a mean CI of 188 for companies advised by law firms outside the Valley, and a mean of 179 for companies advised by New York law firms.¹⁹⁶ As will be discussed in Part IV.I.3, however, neither the Wilson

194. To verify that the difference between Skadden and Wilson Sonsini clients was not a statistical fluke caused by small subsamples, I oversampled IPO companies covered by SDC in 1991-92 advised by both law firms, checking for the most important single defense, the classified board, at all IPOs in which either firm was issuer counsel. Results were qualitatively the same as reported here: only three of the total 43 Wilson Sonsini clients in 1991-92 had classified boards, whereas fourteen of the total twenty Skadden clients had classified boards. A t-test again easily rejects the hypothesis that the two firms provided similar advice about classified boards ($p < .001$).

195. Each of Wilson Sonsini's two early local competitors—Ware & Friedenrich and Fenwick, Davis—appear once in the sample. Friedman et al., *supra* note 53, at 560-61 (detailing the early growth of Wilson Sonsini and Ware & Friedenrich firms). From 1980 through today, Wilson Sonsini left local competition behind, growing from 12 lawyers in 1975 to 120 in 1988, 214 in 1991, 299 in 1996, and 448 in 1998. Ware & Friedenrich, which also had 12 lawyers in 1975, grew more slowly, to 66 in 1988, 86 in 1991, 132 in 1996, and 269 in 1998 (after merging with Gray Cary). In the late 1980s, Wilson Sonsini began to face more competition from branch offices of San Francisco law firms, particularly Brobeck & Phleger and Cooley Godward, see SUCHMAN, *supra* note 52, at 34-44, and, more recently from Gunderson Dettmer (a 1995 spin-off of Brobeck), Venture Law Group (a 1997 spin-off of Wilson), and the Palo Alto offices of Davis Polk, Simpson Thacher, and Sullivan & Cromwell. Lawyer attrition has soared, from spin-offs, lateral moves to out-of-state firms, and moves in-house at start-ups: Wilson lost 110 associates in 1999. Still, Wilson Sonsini remains the leading firm in Silicon Valley today, with 600 lawyers in the year 2000 and the leading market share of IPOs in 1998.

196. Beyond Santa Clara County, defenses are more varied, but evidence suggests that San Francisco-based law firms active in Silicon Valley also followed Wilson Sonsini's lead and installed few defenses for their clients: clients of Brobeck Phleger's office in San Francisco, for example, all had CIs of 45, and none had either classified boards or dual class structures. One Bay Area exception is Cooley Godward, which has an average CI of 420 and installs classified boards at two of its three sample clients. While the subsample is too small to test these differences statistically, Cooley's willingness to depart from Silicon Valley standards in the IPO context is mirrored by a distinctive contract style in the VC context in the same period. See SUCHMAN, *supra* note 52, at 271-72 (contrasting Wilson Sonsini's VC contracts with Cooley's VC contracts). By contrast, Brobeck Phleger's VC contract innovation, *Id.* at 264 (characterizing Brobeck VC agreements as

Sonsini effect nor the general Silicon Valley effect persists from the 1991-92 sample to the 1998-99 sample. A discussion of how to interpret these findings is deferred to Part V.

2. *Company Location and Industry*

In contrast to law firm location, headquarters location appears to have no correlation with takeover defenses, and industry type no correlation with defenses other than dual class structures.¹⁹⁷ Companies headquartered in California had a mean CI of 142, statistically equivalent to that of companies headquartered in New York (162), Massachusetts (148), Pennsylvania (217), or elsewhere in the sample (167).¹⁹⁸ Companies headquartered in Silicon Valley had CIs that are not significantly different from those headquartered outside Silicon Valley, whether in California or elsewhere. The same is true when company location and law firm location are combined in a two-by-two analysis. As shown in Table 5A, companies based in Silicon Valley advised by law firms outside Silicon Valley had more defenses than companies advised by law firms inside Silicon Valley, regardless of where the companies were based.¹⁹⁹ Law firm location has a greater effect on takeover defense adoption than does company location.

"paradigm-pushing"), is not mirrored in this sample of IPOs. Beyond Santa Clara County and San Francisco, the Silicon Valley results do not generalize to other California law firms: once all California law firms are included, mean CI rises to 130, not statistically different from mean CI of 192 for non-California law firms.

197. SUCHMAN, *supra* note 52, at 158-62, finds law firm location, headquarters location, and VC location each separately affect VC financing contracts, but with controls for industry, investment size, and investor diversity, only law firm location effects persist in a combined regression (model 10 in Table 6.7).

198. Classified boards were likewise no less common at companies headquartered in California (27%), New York (34%), or elsewhere in the sample (33%).

199. Although cell counts for Silicon Valley companies and law firms are small, concerns about small subsample sizes should be allayed by the fact that the same qualitative results were found in an oversample of Wilson Sonsini clients. See *supra* note 194.

TABLE 5A
DEFENSES BY LAW FIRM LOCATION AND COMPANY LOCATION

		Company HQ Location	
		Silicon Valley	Other
Law Firm Location	Silicon Valley	Mean CI = 52 n = 7	Mean CI = 45 n = 2
	Other	Mean CI = 178 n = 6	Mean CI = 167 n = 147
<i>Notes</i> Silicon Valley: located in Santa Clara County, California Company HQ: headquarters of company CI: contestability index—see Appendix B			

Mean and median CIs for particular industry subgroups were also not very different from the full sample. One-way analysis of variance shows insignificant variation across industry groups of mean CIs or incidence of dual class control structures or classified boards ($p > .25$), and a Kruskal-Wallis test shows insignificant variation of median CIs ($p > .80$).²⁰⁰ Nor do industry and company location interact in any discernible way: defenses at high-tech companies headquartered in California (or Silicon Valley) did not differ significantly from high-tech companies headquartered elsewhere, either as a group or within specific high-tech industries.²⁰¹ Again, a simple two-by-two analysis of defenses by law firm location and companies in “high-tech” industries, shown in Table 5B, confirms that law firm location dominates in its effect on takeover defense adoption. Companies in “high tech” industries advised by law firms outside Silicon Valley have more defenses than companies in other industries, and

200. Except for dual class structures, apparent differences in Table 5 are not robust. At the two-digit SIC level, health services companies in the sample have higher CIs than average, but at the three-digit level, they have lower CIs, and median CIs are not significantly different from the full sample at either level. Computer equipment companies, which have a lower than average CI at both two- and three-digit levels and are less likely to have dual class control structures, have statistically indistinguishable median CIs at both levels, and statistically similar odds of having classified boards.

201. High-tech industries, by three-digit SIC categories, are computer equipment (357), software (737), electronics (367), medical instruments (384), and “biotech,” consisting of drugs (283) and health services (809). These industries drive Silicon Valley. SUCHMAN, *supra* note 52, at 13-23; ROGERS & LARSEN, *supra* note 143, at 25-42. Mean CIs, and classified board and dual class incidence, are nearly the same for California-HQ versus non-California-HQ, and Silicon-Valley-HQ versus non-Silicon-Valley-HQ, in each industry and in all high-tech industries as a group.

companies advised by Silicon Valley law firms, high-tech or not, have nearly no defenses.²⁰²

TABLE 5B
DEFENSES BY LAW FIRM LOCATION AND COMPANY INDUSTRY

		Company Industry	
		High-Tech	Other
Law Firm Location	Silicon Valley	Mean CI = 55 n = 6	Mean CI = 45 n = 3
	Other	Mean CI=200 n = 52	Mean CI=153 n = 101
<i>Notes</i> Silicon Valley: law firm located in Santa Clara County, California High-tech industry: high-tech 3-digit SIC code—see note 185 CI: contestability index—see Appendix B			

3. State of Incorporation

The state of incorporation of IPO companies also accounts for differences in takeover defenses. Companies incorporated in Delaware had more defenses than average (mean CI of 188 versus 121 for non-Delaware companies, $p < .03$), and adopt classified boards more frequently than non-Delaware companies (38% versus 26%).²⁰³ By contrast, companies incorporated in California have fewer defenses than average (mean CI of 45, $p < .001$), as do those that follow the RMBCA on control defaults (mean CI of 100, $p < .001$). Not a single sample company incorporated in

202. "High-tech" industries are listed *supra* note 201. Nor are industry or company patterns of defense adoption revealed by simply eyeballing the sample, as reflected in Table 2. Defenses are adopted by some but not all of the larger, well-known companies in mature industries, and some but not all of the smaller, development-stage companies in high-tech industries. Defenses were adopted by some but not all companies intending to use IPO proceeds to pay down debt, and some but not all companies intending to use IPO proceeds to fund additional research and development.

203. In their multivariate regressions, Field & Karpoff find Delaware companies have more defenses, *supra* note 8, at 38 tbl.4, especially shareholder meeting requirements, *id.* at 39 tbl.5, but are no more likely to have classified boards. The fact that Delaware companies adopt more defenses on average suggests that whatever causes the "Delaware effect" found in Robert Daines, *Does Delaware Law Improve Firm Value?* (N.Y. Univ. Ctr. for L. & Bus., Working Paper CLB-99-011, 1999) (on file with author), the cause is not greater vulnerability to hostile takeovers on the part of Delaware companies, as Daines speculates.

California adopted a classified board, compared to 33% for the full sample ($p < .001$), and companies that follow the RMBCA control defaults adopt fewer classified boards than average (23%, $p < .06$).

4. Underwriters

Underwriter reputation also correlates positively with defenses. In a simple regression of CI on Carter-Manaster ratings for the lead underwriters in the sample, the coefficient was positive and statistically significant ($p < .02$), as shown in Table 5. Likewise, companies with higher-quality underwriters were more likely to install classified boards ($p < .01$). Among IPOs involving the top ten lead managers in the sample, which have higher than average C-M ratings, all but one had significantly higher than average CIs and classified boards,²⁰⁴ and regressions of the top ten sample underwriters on CI and classified board were positive and statistically significant. Overall, the better the underwriter, the more defenses employed.

5. Development Stage Companies and Unit Offerings

About 23% of the sample companies were still in the development stage, and about 11% of the IPOs are unit offerings.²⁰⁵ Both types of companies adopted significantly fewer defenses: a mean CI of 107 for development-stage companies, compared to 179 for other companies, and mean CI of 56 for companies engaging in unit offerings, compared to 175 for other companies ($p < .05$ for each). Companies engaged in unit offerings were also significantly less likely to adopt classified boards (11%, compared to 35% for other companies, $p < .02$). Dual class structures, however, were no less common at development-stage companies or companies conducting unit offerings.

6. Owner Type and CEOs

Prior to the IPO, about 9% of the sample companies were owned in whole or in part by corporate parents, another 19% by LBO funds,²⁰⁶ about 35% by VC funds,²⁰⁷ and about 32% by individuals or families (with slight

204. The one exception is Robertson Stevens (4% of the sample).

205. Two-thirds of the unit offerings in my sample are development stage companies. Field excludes unit offerings, and finds fewer (7%) development-stage companies.

206. Cf. Field, *supra* note 8, at 16 (reporting that 12% of 1,019 IPOs 1988-92 are equity carve-outs, and 21% reverse LBOs). Ritter, *supra* note 14, at 16 n.15, found a tiny number of reverse LBOs (15 of 1,526 IPOs 1975-84) because LBOs themselves were rare prior to the 1980s. Daines & Klausner, *supra* note 8, at 93, purposely oversampled reverse LBOs and VC-backed IPOs.

207. VC backing in the sample is similar to overall VC backing of IPOs in the sample period, as reported by Venture Economics in 1997, with VCs backing 30% (287 of 988) firm commitment non-closed-end fund IPOs reported in *Going Public: The IPO Reporter* in 1991-92. VENTURE ECONOMICS, VENTURE CAPITAL YEARBOOK (1997); GOING PUBLIC: THE IPO REPORTER, Dec. 31, 1991, at 1; GOING PUBLIC: THE IPO REPORTER, Dec. 31, 1990, at 1. See also William A. Sahlman, *Structure and Governance of Venture Capital Organizations*, 27 J. FIN. ECON. 473, 478 tbl.1 (1990) (reporting 30%

overlap among these categories).²⁰⁸ With one exception, none of these subsets of companies show significantly different defenses than other companies. The exception to these nonresults is companies owned by individuals or families, which are more likely to adopt dual class control structures. Companies that use an owner name in their business name are also more likely to adopt dual class structures.²⁰⁹ Table 5 summarizes this data.

7. *Summary of Mean Comparisons*

In sum, law firm identity and location have clear relationships with defenses adopted.²¹⁰ Company industry or headquarters location, in contrast, have no significant effect. Together these findings support the lawyer hypotheses: the lawyer-client relationship has more to do with defense adoption than do any positive or negative effect of defenses on company value.²¹¹ In addition to lawyers, underwriter identity correlates with defense adoption, consistent with the banker hypotheses. Surprisingly, however, companies advised by higher-quality underwriters are more likely to adopt defenses, not less. If price penalties are imposed by the IPO market as a result of defense adoption, it seems likely that pre-IPO owner-managers are aware of that fact, and variation in defense adoption cannot be attributed solely to failure in the market for underwriter services.

8. *Gaffes*

One final preliminary finding supports the core of the lawyer hypotheses, that lawyer-client agency costs are an important part of the contracting process leading to defense adoption in IPOs. In the sample, the process of reviewing governance terms uncovered a large number of "gaffes," or

of non-fund IPOs 1977-88 above \$1 offer price were VC-backed). VC backing in the sample is slightly higher because *Venture Capital Yearbook* (which relies largely on self-reporting by VCs) is slightly less reliable than inspection of IPO prospectuses. Only two of 17 unit offerings in the sample have VC backing; if excluded, VC backing rises to 41%. Cf. Field, *supra* note 8, at 32 tbl.1 (reporting VC-backing at 45% of 1,019 IPOs 1988-92; sample excludes unit offerings).

208. Field, *supra* note 8, at 32 tbl.1 shows a much lower 4% for family-owned firms, because she counts only firms owned by a single individual.

209. In contrast, but consistent with Daines & Klausner, *supra* note 8, at 108 tbl.6, the fact that a company was founded by the person who is the CEO at the time of the IPO has no effect on adoption of any type of defense in simple mean comparisons.

210. This is despite the fragmented nature of the market for lawyers in the IPO context, with resulting difficulties in finding empirical regularities even in sizeable samples. See *supra* note 97 for data on fragmented IPO lawyer market.

211. These inferences are reinforced by the striking fact that the number of classified boards, and mean and median CIs, are statistically the same for companies with ordinary one-share/one-vote capital structures as for dual class firms (both for dual class structures as a whole, and for companies that sell low-vote stock in the IPO). This similarity suggests either that dual class capital structures are not viewed as substitutes for other types of defenses, or that the process that generates other defenses is sufficiently imprecise or unconstrained that defenses are not fine-tuned to reflect something as basic as whether pre-IPO owners intend to retain a "lock" on control.

apparent legal mistakes.²¹² Many gaffes are clear and uncontroversial, such as contradictions between charter and bylaws, or between charter and mandatory terms of state corporate law. Also found are what appear to be “functional mistakes,” such as the selection of staggered boards (which impose more delay on shareholders’ ability to appoint a new board majority) but the simultaneous inclusion of terms (such as allowing shareholders to act by written consent and remove directors) that “undo” the effect of a staggered board, rendering it useless.²¹³ Table 3 reports summary statistics on uncontroversial gaffes: conflicting or illegal provisions are observed in 10% of the sample. In addition, functional mistakes appear in an overlapping 18% of the sample. Clear gaffes and functional mistakes reinforce the evidence suggesting that lawyers have much to do with defense variation. If the constraints on law firms were significant and general, one would not expect to ever see such clear gaffes as illegal provisions.²¹⁴

I. Multivariate Regression Analysis

The effects of law firms on takeover defense incidence are tested in multivariate regressions, shown in Table 6.²¹⁵ The various hypotheses

212. Gaffes were not initially sought in the research and were discovered as a by-product of the governance term review process. As a result, only the most egregious and clear gaffes were likely to be found, and data reported likely understates gaffes in the sample.

213. Delaware law provides in DGCL section 141(k), DEL. CODE ANN. tit. 8, § 141(k) (1991 & Supp. 1998), that unless the charter says otherwise, directors on classified boards can only be removed for cause, but this default rule can be altered by a provision in the charter. The equivalent provision of the RMBCA allows removal without cause as a default matter, even for classified boards. In my view, it is a functional mistake for a Delaware company to adopt a classified board but simultaneously include a charter provision allowing removal without cause, as several companies in my sample did, as well as for a RMBCA-governed company to adopt a classified board and fail to include a charter provision specifying that directors may only be removed for cause.

214. Although some of what are apparently functional mistakes may have been intentional, justifications for such provisions are not compelling. For example, staggered boards that can be avoided by shareholder action have been justified on the ground that they provide board stability and were not intended to serve as takeover defenses. See Koppes et al., *supra* note 21, at 1053-54. But there is no strong reason that a board that is not staggered could not provide for stability in other ways. It could adopt a resolution or bylaw specifying that directors’ ongoing tenure would be up for review every few years or so, and stating that directors would be ordinarily replaced in a planned and careful manner. Such a resolution or bylaw would not deter a hostile bid or shareholder effort to remove the board, but would otherwise provide the same degree of “stability” provided by staggered board provisions, which do not after all prevent board members from resigning whenever they wish. It should also be noted that directors may generally not remove other directors without cause, so that to the extent the concern for stability is solely about intra-board conflicts, removal without cause provisions are irrelevant. In any event, the fact that clear gaffes (other than arguable mistakes) were also commonly found in the sample reinforces the general impression that lawyers working on IPOs do not spend much time perfecting, much less fine-tuning, provisions with a clear and nuanced sense of the client’s advantage in mind.

215. As data is missing for some companies (primarily companies not found in COMPUSTAT), the number of observations declines as the models become more complex. A Cook-Weisberg test indicates heteroscedasticity in the base model, so all results are reported with White-Huber robust standard errors. See H. White, *A Heteroscedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroscedasticity*, 48 *ECONOMETRICS* 817 (1980).

described in Parts II and III may be formalized in a simple model as follows:

$$\text{Defenses} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where X_1 is a vector of explanatory variables, X_2 is a vector of control variables, and ε is a standard error term. The principal dependent variable is the contestability index described in Part IV.B. The emphasis in this section is presentation of findings; the results are interpreted in Part V.

1. Basic Findings

Model (1) is the simplest, ordinary least squares ("OLS") model, containing two law firm variables (SUITSDEL and SILVAL) and two control variables (MAINACT and CM2). Each law firm variable is statistically significant and has the predicted sign. The more M&A-related lawsuits involving a company's IPO counsel in the 1980s, the stronger the defenses that company adopts (measured by its contestability index). Clients advised by law firms based in Silicon Valley adopt many fewer defenses (measured by the CI) than clients advised by law firms based elsewhere, even after controlling for law firms' M&A experience. In addition, consistent with the findings of Daines & Klausner,²¹⁶ significantly more defenses are adopted by companies in industries experiencing higher levels of M&A activity in the three years prior to the IPO. Finally, underwriter quality has a positive and statistically significant impact on defenses. Better quality underwriters correlate with more defenses, controlling for law firm proficiency, location, and industry-M&A activity.

216. Daines & Klausner, *supra* note 8, at 102 (noting more defenses following more industry level M&A activity).

TABLE 6
EFFECTS OF LAW FIRMS ON TAKEOVER DEFENSE INCIDENCE

	(1)			(2)			(3)		(4)		(5)	
	OLS, CI as dependent variable			logit, CLASS as dependent variable			logit, DUALCON as dependent variable		ordered logit, DEFENSE as dependent variable			
	coefficient	p-value	coefficient	p-value	coefficient	p-value	coefficient	p-value	coefficient	p-value	coefficient	p-value
Intercept	31.680	0.214	-74.313	0.271	-3.741	0.000	-9.119	0.000				
SUITSDEL	2.582	0.025	3.217	0.000	0.020	0.066	0.010	0.602			0.017	0.031
SILVAL	-135.108	0.000	-168.884	0.016	-1.937	0.091						
MAINDACT	6.080	0.041	7.692	0.001	0.048	0.101	-0.029	0.738			0.045	0.103
CM2	11.995	0.001										
VC			96.542	0.009	0.859	0.052	0.487	0.660			0.504	0.200
DEVEL			-58.542	0.132	-0.422	0.402	1.786	0.036			0.110	0.792
AGECO			5.190	0.002	0.040	0.059	0.040	0.454			0.046	0.013
AGECSQ			-0.040	0.008	0.000	0.051	-0.001	0.369			0.000	0.007
CEOFOUND			62.017	0.058	0.380	0.360	0.056	0.946			0.497	0.187
LNOFFSZ			23.331	0.142	0.574	0.004	1.068	0.005			0.808	0.000
FAMILY							3.460	0.000			1.053	0.020
NAME							2.403	0.046			1.668	0.027

	(1)	(2)	(3)	(4)	(5)
	OLS, CI as dependent variable		logit, CLASS as dependent variable	logit, DUALCON as dependent variable	ordered logit, DEFENSE as dependent variable
Observations		159	154	146	154
F or chi2		9.070	6.81	35.16	37.57
p > F or chi2		0.000	0.000	0.000	0.000
(Pseudo) R2		0.176	0.323	0.386	0.107

No significant results for the following (or changes in significance of coefficients on other variables if the following are included as controls):

Theory	Agency Costs	Bargaining Power	Market Myopia	Private Benefits
Variables Tested	FCF5 FCF5POS DEBTASST ROE, ROA	RETAIN SHH1	CAP5ASST PPEASST PPENET RD5ASST	CEOTEN PBIND

Models (1) through (2) are ordinary least squares regressions, with contestability index (CI) as the dependent variable (described in Appendix B). Models (3) and (4) are logit regressions, with CLASS and DUALCON as dependent dummy variables, set to one if the issuer respectively had a (a) classified board or (b) dual class capital structure and sold low-vote stock in the IPO. Model (5) is an ordered logit, with DEFENSE as a dependent dummy variable, ranking defenses in tiers (described in Appendix C). All models have White-Huber robust standard errors. The sample consists of 159 IPOs 1991-92. SUITSDEL is a measure of the IPO company counsel's M&A proficiency, and SILVAL is a dummy set to one if IPO company counsel is in Silicon Valley. See Appendix C for definitions of variables.

Model (2) adds to the base model several controls that represent potential constraints on law firm autonomy, such as company size, company age, and whether the company is at the development stage.²¹⁷ The results of model (1) continue to hold. Coefficients for each variable in model (1) are larger, levels of significance higher, and the explanatory power (adjusted R-squared) rises to a healthy 32%. In addition to the variables reported, Table 6 lists variables testing the alternative hypotheses that were added to model (2) in unreported regressions. None of these variables tested had a significant impact on the variables shown.

Given the construction of the contestability index, interpretation of coefficients is straightforward. Not only are the effects of law firm identity and location statistically significant, they are also large in absolute terms. An estimate from model (2) is that companies with Silicon Valley law firms can be taken over in 169 fewer days, on average, than other sample companies. Companies advised by Silicon Valley law firms, in other words, will have on average almost six fewer months to seek alternatives should they become targets of hostile bids. For every ten Delaware M&A lawsuits involving IPO counsel, its client increases by a month the number of days shareholders need to replace a majority of the board ($10 \times 3.2 = 32$ days). As a law firm's M&A proficiency increases from the 10th percentile to the 90th percentile (using SUITSDEL as a measure of M&A proficiency and holding other factors constant at their mean values), the number of days shareholders need to replace a majority of the board increases by roughly three months. For every ten M&A transactions in a company's industry, a company increases its time to takeover by seventy-seven days.

Where significant, coefficients on control variables in model (2) are consistent with the law firm hypotheses. Once law firm effects are controlled for, VC-backing increases defenses. Defenses are more likely at companies that are older, up to the hoary age of 130 years, after which the negative coefficient on AGECSQ dominates the positive coefficient on AGECSQ.

2. Robustness Checks

The robustness of model (2) is tested using alternative dependent variables, shown in Table 6 in models (3) through (5).²¹⁸ Perhaps the

217. Underwriter quality is omitted from model (2) because CM2 is highly collinear (~.7 correlation) with LNOFFSZ, as it is in Carter et al., *supra* note 98, at 1057. In unreported regressions using CM2 instead of offer size, similar findings were obtained: the sign on CM2 remains positive throughout, although its statistical significance is marginal in some models. *See also infra* note 222 (presenting unreported regression of CM2 and other predictors of classified boards). Multicollinearity of other regressors is excluded by confirming that none of the correlations between them in Model (2) exceed 0.2.

218. Because the primary measures of a law firm's M&A proficiency are highly collinear, only SUITSDEL is included in the reported regressions. As a further robustness check, all of the primary results were obtained in unreported regressions replacing SUITSDEL with SUITSALL or MASDC

contestability index, though theory-driven, is also dictating the results in some way. Dual class capital structures and classified boards are worth separate exploration as defenses that require shareholder approval and have the greatest potential to deter bids.²¹⁹ Such defenses in isolation from other defenses have also been the subject of prior empirical work.²²⁰ Models (3) and (4) are logit regressions with CLASS or DUALCON as dependent variables, and model (5) is an ordered logit regression using DEFENSE as the dependent variable, which is a theory-driven ranking that includes classified boards and dual class structures in a four-level ranking of increasing "toughness," in line with prior research.²²¹

Again, model (1)'s results continue to hold. Model (3), which correctly predicts board classification in the sample 74% of the time, also predicts that as a law firm's M&A proficiency increases from the 10th percentile to the 90th percentile (using SUITSDEL, and holding other factors constant), the odds its clients will adopt a classified board increase by about 20%. Clients of Silicon Valley law firms are less likely to adopt classified boards. More likely to adopt classified boards are companies in industries where pre-IPO bids were common, companies that are backed by VCs, that are older (up to a point), or engaged in larger offerings. The insignificance of the other controls tested in model (3) compared to the base model suggests the other controls are less related to classified boards than they are to other governance terms, such as whether shareholders can call special meetings or remove directors without cause.²²²

(coefficients vary slightly but statistical significance levels remain above 99%). The model also produces results when SUITSDEL is replaced with a combination of LAWFRM1 and LAWFRMSQ, which have negative and positive coefficients, respectively, although these results are less statistically significant ($p < .05$) and less robust to other controls. Law firm size also matters, but less than M&A proficiency, and has a curvilinear relationship with defenses: moderate CI (~200) at small firms (<50 lawyers), low CI (~100) at mid-sized firms (50-150 lawyers), and high CI (~400) at large firms (>150 lawyers). Finally, concern about possible outliers suggested re-running model (2) and both dropping observations with Skadden Arps, which is the non-Silicon Valley law firm appearing most often in the sample, and adding a control variable for Skadden Arps. Results in each case were qualitatively identical to those reported in model (2).

219. Coates, *Critique*, *supra* note 23, at 273, 325-26.

220. Daines & Klausner, *supra* note 8, at 95-97; Field, *supra* note 8, at 8-15.

221. See Appendix C for the definition of DEFENSE, which is similar to a ranking used in Daines & Klausner, *supra* note 8. In models (5) and (6), SILVAL is omitted because none of the Silicon Valley clients in the sample adopt dual class structures, making SILVAL a perfect "anti-predictor" of such defenses.

222. In a separate, simple unreported logit regression containing just UNIT, MASDC, RETAIN, and CM2, similar results are also obtained, with each variable being significantly related to board classification. In that model, as law firm M&A experience increases from the 10th percentile (zero deals) to 90th (seventy-one deals), odds of board classification increase from 28% to 44%; as Carter-Manaster ratings of the lead underwriter increase from the 10th percentile (rating of two) to the 90th (rating of nine), odds of board classification increase from 18% to 37%; as pre-IPO shareholder share retention increases from the 10th to the 90th percentile, odds of board classification increase from 21% to 46%; and unit offerings have a 23% lower chance of having a classified board.

Not only are dual class structures themselves not correlated with other defenses, model (4) shows that (non-law-firm) predictors of dual class structures differ from predictors of other types of defenses. A large proportion of dual class incidence in the sample is predicted by three variables from the mean comparison analysis in Part IV.H: NAME, FAMILY, and LNOFFERSZ. Consistent with Field,²²³ dual class structures seem both qualitatively different from other defenses and related to (nonpecuniary) private benefits of control, represented here by NAME and FAMILY.

The ordered logit results in model (5), finally, confirm the main results of both this simplified model (for dual class structures) and the base model (for other defenses). The fact that the ordered logit has lower predictive power, and that some of the control variables that are consistently significant in the other models are not significant in the ordered logit, confirms the theoretical inferiority of simply ranking defenses in broad categories with little regard to the interactions among them.²²⁴ But this fact does not undermine the main evidentiary conclusions of the base model: law firms affect defense incidence.

3. *Testing Persistence: The 1998-99 Sample*

To see if the primary findings from the main sample persisted during the 1990s, a separate sample of 195 IPOs was randomly chosen from 1998 and 1999. The number of variables investigated was significantly reduced from those investigated in the main sample (solely for time and budgetary reasons). Explanatory variables gathered were lead underwriter and Carter-Manaster ratings; law firm identity, location, and M&A proficiency;²²⁵ offer size; earnings for the fiscal year in which the IPO took place; and state of incorporation. Dependent variables tested consisted of the following governance terms: classified boards, dual class capital structures, and elimination of shareholders' ability to act by written consent or call a special meeting. These three terms are the dependent variables used to construct the variable DEFENSE tested for the main sample in model (5) in Table 6.

Again, basic findings from the main sample are confirmed. Defenses are common at the IPO stage, but continue to vary significantly among companies. Defenses are more common when companies are (a) advised

223. Field, *supra* note 8, at 14.

224. For theoretical reasons that the contestability index is a better measure of legal takeover vulnerability, see Coates, *Index, supra* note 26, at 64-71.

225. The MASDC variable was updated for this model, to account for M&A experience during the 1990s.

by law firms with more M&A proficiency, (b) represented by higher-quality underwriters, or (c) engaged in larger offerings.²²⁶

Two contrasts between the temporal samples are worth highlighting. First, general defense incidence in the 1998-99 sample is higher than in the 1991-92 sample. As reflected in Figure 3, classified board incidence at the IPO stage rose strikingly from 34% in 1991-92 to 66% in 1998 to 82% in 1999.²²⁷ Companies in the lowest rank (weakest defenses) of the DEFENSE variable fell from 55% in 1991-92 to 42% in 1998-99, while companies in the highest rank (toughest defenses) rose from 23% in 1991-92 to 39% in 1998-99. Using DEFENSE and dual class structures to predict what CI would have been had the full index been constructed for the 1998 sample,²²⁸ predicted CI was 219, 31% higher than in 1991-92. On the other hand, companies adopting dual class capital structures dropped by almost half, from 11% in 1991-92 to 6% in 1998-99,²²⁹ consistent with the view that those structures are adopted for reasons distinct from other types of defenses. Delaware's dominance over state of incorporation for new public companies rose during the 1990s from 62% of IPOs in 1991-92 to 75% in 1998-99.

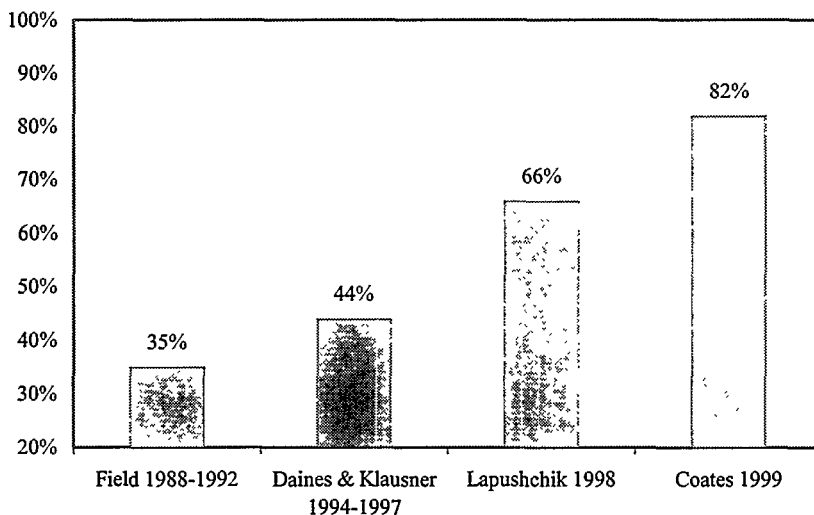
226. Delaware companies also adopted more defenses in 1998-99. Coefficients (p-values) on separate ordered logit regressions using DEFENSE as the dependent variable are as follows: MASDC 0.009 (p < .06); CM2 0.349 (p < .03); DEINC 1.340 (p < .00); and LNSZ 0.707 (p < .00).

227. This time trend is consistent with Field, *supra* note 8, at 12, who finds classified boards in 35% of IPOs from 1988 to 1992, and Daines & Klausner, *supra* note 8, at 95, 96 tbl.2, who find classified boards in 43.5% of IPOs from 1994 to 1997. The trend is interesting given that existing public companies have almost never adopted classified boards "midstream" in the same time period and that total incidence of classified boards in large companies tracked by IRRC has risen much more slowly. Coates, *Critique*, *supra* note 23, at 324 fig.1.

228. In an OLS regression of DEFENSE on CI, the R-squared is 32%. If dual class structures are further controlled for, the R-squared rises to 52%.

229. Here, all dual class capital structures are compared, rather than dual class control structures, which have been used in most of the analysis for the main sample. Data on whether companies sold low-vote stock was not gathered for the 1998 sample.

FIGURE 3: CLASSIFIED BOARD INCIDENCE IN IPOs
1988-1999



Second, defenses adopted by companies advised by Silicon Valley law firms no longer depart as dramatically from other law firms, both absolutely and after controlling for M&A proficiency (which increased somewhat for Silicon Valley firms in the 1990s).²³⁰ Classified boards were installed at 25% of Wilson Sonsini's clients, and a dual class structure at another; four of Brobeck Phleger's nine clients adopted classified boards, and another a dual class structure; and for Silicon Valley clients as a whole, half adopted classified boards (compared to none for the main sample).²³¹ Predicted CI for Silicon Valley law firm clients was 213, slightly below but statistically equivalent to that predicted for the full sample.

V

INTERPRETATIONS

Two large random samples of IPOs from 1991-92 and 1998-99 confirm that takeover defenses at the IPO stage are common but vary significantly from company to company and reveal the new fact that defenses became significantly more common at the IPO stage in the late 1990s. Analysis of the samples reveals the new finding that companies are more likely to adopt defenses if their law firms have more M&A proficiency,

230. Wilson Sonsini's SUITSDEL rating, for example, rose from one in the 1980s to thirteen in the 1990s, while ratings remained constant for Skadden Arps (eighty-six in the 1980s, eighty-four in the 1990s) and Sullivan & Cromwell (ten in the 1980s, twelve in the 1990s).

231. Compared to other law firms in Silicon Valley, Cooley Godward's clients continued to be most likely to adopt defenses, with all four adopting classified board structures.

measured by the number of M&A lawsuits or transactions in which the law firms were involved in the period prior to the IPO. Defenses were significantly less likely in the early 1990s if the law firm advising the company was based in Silicon Valley, but this correlation disappeared by the late 1990s. Defenses are also more likely if the company had a more highly respected underwriter or venture capital backing or was in an industry that experienced high levels of M&A activity prior to the IPO. In addition, the data reveal that lawyers commonly made clear mistakes in IPO documents, including adoption of clearly illegal terms, terms that clearly conflict with one another, and terms in context that appear to perform no useful function.

The correlation between law firms' M&A proficiency and defenses is not driven by testable differences in the clienteles of law firms: the correlation persists after controlling for company size, age, profitability, location, industry, leverage, underwriter reputation, stage of development, VC-backing, family ownership, insider ownership, shareholder dispersion, CEO tenure and age, R&D intensity, and capex intensity. The correlation is robust to the measure of M&A proficiency, to the type of defense adopted, and to specification of model. Moreover, the correlation between law firm M&A proficiency and defenses is stronger than that between defenses and any other variable tested, including recent M&A activity in a company's industry. The relationship between law firm M&A proficiency and defenses fell during the 1990s, in all likelihood due to learning effects, but persists to some extent even in the 1998-99 period.

Interpreting these basic findings is relatively straightforward. Given the strength, robustness, and persistence of the relationship between law firm M&A proficiency and defenses, it seems clear that legal advice in large part determines what defenses companies adopt at the IPO stage. One can say with high confidence that lawyers with more M&A proficiency are more knowledgeable about, pay more attention to, and are more likely to advise clients to adopt defenses. Thus, the simplest plausible interpretation of the principal empirical findings is that proficient law firms instill an awareness of defenses in lawyers or cause defense adoption by relying on internal boilerplate that includes a large number of defenses.²³² And, given the absence of any evidence that companies are sorting themselves among law firms at the IPO stage based on the law firms' M&A proficiency, it seems highly likely that some owner-managers are getting good advice from their law firms, and others are getting bad advice, about what de-

232. Law firm size also matters in the multivariate regressions, although not in simple mean comparisons nor as consistently as M&A proficiency. Other things held equal (particularly M&A proficiency), larger law firms are more likely to include defenses than smaller law firms. This is in part because larger firms are more likely to have M&A proficiency, but also because large firms are more likely to use boilerplate, so that large firms with proficiency tend to uniformly include defenses, large firms without proficiency tend to uniformly exclude them, and small and mid-sized firms are more variable in the defenses they recommend.

fenses to adopt. This interpretation is supported by the evidence of obvious gaffes and legal mistakes in the defenses that are adopted, and it would explain the trend toward greater uniformity (less variation) in defenses during the 1990s.

The interpretation of other findings is less certain. One explanation of the "Silicon Valley law firm effect," for example, is that law firms in geographically proximate regions tend to develop similar documentation and advice that is more similar among themselves than between themselves and law firms elsewhere. Prior to the mid-1990s, few hostile bids were made for high-technology companies and for Silicon Valley companies in particular. As such, Silicon Valley law firms did not engage in large amounts of M&A work of any sort. Although the Silicon Valley effect persists even after a control for M&A activity in a company's industry is introduced, the combination of low levels of M&A activity in high-tech industries and a tight-knit legal community may have made defenses even less likely in Silicon Valley than elsewhere. Lawyers who are highly successful in one line of work, too, may suffer from a touch of complacency when they begin to diversify; Wilson Sonsini's intimate knowledge and expertise of the needs of private companies as they move from start-up through several rounds of private financings may have made the firm's lawyers less anxious than they should have been about advising companies in the IPO stage about issues (governance terms) that would have little effect for years.²³³

Consistent with this interpretation, data from 1998-99 show that Silicon Valley lawyers began to install more defenses as the risks of not doing so became more salient to all involved. The mid-1990s witnessed several high-profile takeovers of companies heavily dependent on human capital: GE's bid for Kemper, IBM's 1995 bid for Lotus, and Softkey's 1995 bust-up bid for The Learning Company ("TLC").²³⁴ The last bid, in particular, was highly salient to Silicon Valley lawyers and executives, given that TLC was based in Silicon Valley and Wilson Sonsini served as counsel to disappointed suitor Broderbund, which had agreed to acquire TLC before Softkey launched its bid. Although TLC's need to obtain shareholder approval for its deal with Broderbund and Softkey's willingness to overbid Broderbund explain Softkey's victory, TLC's weak defenses meant that it did not have the option of canceling its merger with

233. Cf. LAW FIRM MANAGEMENT, *supra* note 40, § 1.6.1 (setting forth a case study of Csaplar & Bok, the Boston law firm highly successful in net lease financings that made flawed diversification efforts and eventually merged with Gaston & Snow just months before it failed).

234. Susan Antilla, *Kemper Board Discusses Hostile G.E. Bid*, N.Y. TIMES, Mar. 17, 1994, at D4 (describing the GE bid for Kemper, a financial services company); J. FRED WESTON ET AL., TAKEOVERS, RESTRUCTURING, AND CORPORATE GOVERNANCE 170 (2d ed. 1998) (setting forth IBM-Lotus case study); Lisa Benshoff, *Deals and Suits*, LEGAL TIMES, Dec. 4, 1995, at 13 (listing lawyers involved in Softkey-Learning Company fight); Lawrence M. Fisher, *Softkey Reaches Agreement to Buy Learning Company*, N.Y. TIMES, Dec. 8, 1995, at D2 (announcing Softkey success in bid for The Learning Company).

Broderbund and attempting to remain independent.²³⁵ Given this fight, which directly involved Silicon Valley's premier law firm in a high-profile takeover battle, it would have been surprising had Wilson Sonsini clients not increased their use of pre-IPO defenses in the 1990s.²³⁶

An alternative interpretation of the Silicon Valley effect is that some difference in the clients that Silicon Valley law firms advised in the early 1990s (but not in the late 1990s) explains the difference in the defenses those clients adopted. Commenting on an early version of this paper, for example, partners from Wilson Sonsini suggested that their clients were part of a different corporate culture—the “whole Berkeley peace love thing,” as one put it—that led them to resist advice to adopt defenses.²³⁷ One difficulty with such an explanation is that it is not clear how typical defenses (classified boards, for example) would conflict with “West Coast culture,” but a bigger difficulty is that the Silicon Valley law firm effect persists even after controlling for company headquarters' location. As shown in Part IV.H, it is not companies based in Silicon Valley that correlate with few defenses; it is clients (wherever located) of law firms based in Silicon Valley.²³⁸

Law firm effects may also account for the relationship between defenses and state of incorporation. Because the decision to reincorporate prior to the IPO is made almost exclusively by companies reincorporating in Delaware, one can infer that the decision to reincorporate is commonly

235. TLC was vulnerable because its charter permitted its shareholders to call a special meeting and remove existing directors. *Kidsco Inc. v. The Learning Company*, 674 A.2d 483, 485 (Del. Ch. 1995). TLC was able to delay Softkey's proxy fight and hostile bid briefly by adopting a bylaw delaying the special meeting until some time after the initial TLC-Broderbund merger agreement could be submitted to TLC shareholders, *id.*, but Softkey would have been able to prevail in less than two months, one way or another. Ironically, Softkey (subsequently renamed TLC) was able to acquire rival bidder Broderbund not long thereafter. See Lawrence Fisher, *Learning Company to Acquire Broderbund in Stock Swap*, N.Y. TIMES, June 23, 1998, at D-1.

236. Even more salient for Silicon Valley was the 1998 battle between Mentor Graphics and Quickturn. Larry Sonsini served both as counsel in Quickturn's 1993 IPO, see Krysten Crawford, *Quickturn Design Systems*, THE RECORDER, Dec. 15, 1993, at 2 (reporting Quickturn IPO, with Larry Sonsini of Wilson Sonsini as company counsel), and as counsel to Quickturn as target during Mentor's bid in 1998, see Mentor Graphics's bid for Quickturn, *Quickturn Design Sys. v. Shapiro*, 721 A.2d 1281 (Del. 1998). The near absence of pre-IPO defenses put pressure on Quickturn to sell to a white knight after its heavily litigated effort to remain independent failed. *Id.* This fight came too late in 1998, however, to explain the increased defenses for Silicon Valley clients in the 1998 sample.

237. The Wilson Sonsini partners also argued that it is impossible to say with any generality what defenses companies should adopt; in essence, one size does not fit all. The problem with this claim is that even if it is true, it is inconsistent the data: Wilson Sonsini's clients adopted virtually no pre-IPO defenses in 1991-92, regardless of industry, size, or other company characteristics.

238. The same is true for “high-tech companies,” as Table 5B shows. As with the M&A proficiency effect, the Silicon Valley effect persists after including controls for company size, age, cash flow, pre- and post-IPO profitability, leverage, VC-backing, and underwriter quality. In addition, since defense adoption by clients of Silicon Valley law firms has increased markedly in the 1990s, such an account would require that “West Coast culture” persisted through several IPO boom and bust cycles in the 1970s and 1980s, but then disappeared for unexplained reasons during the 1990s.

initiated and requires drafting and filing of corporate documents by corporate lawyers, who in that process consider a client's defenses more carefully than they might otherwise, resulting in the adoption of more defenses. Passive adoption of default law by companies not reincorporating is consistent with the fact that companies incorporated in states that follow the RMBCA's control default provisions adopt fewer defenses. By contrast, dual class structures, which in every state must be expressly and consciously installed, do not vary by state of incorporation, with 7-8% of companies adopting them in Delaware, California, RMBCA states, and other states.²³⁹

Another finding of both the mean comparisons and multivariate regressions is that defenses are much more likely to be adopted by companies in industries with higher levels of pre-IPO M&A activity. On one level, this may not seem surprising: if takeovers are more common, defenses are more useful, that is, efficient and value-increasing. But without more, this analysis fails because M&A activity in a given industry is a poor predictor of M&A activity in the same industry beyond the next year or two,²⁴⁰ and companies are usually invulnerable to hostile bids for a year or two after an IPO.²⁴¹ A simpler interpretation is that high industry-M&A activity increases the salience of takeover risk, making managers (VCs, directors, and so on) more likely to monitor lawyers with respect to defenses before the IPO and lawyers more likely to install defenses.

Still, the results seem more consistent with defenses being generally good for owner-managers to adopt pre-IPO than for them to be generally bad. Defenses are more likely when better underwriters are involved, so that managers of companies adopting defenses seem more likely to be aware of any price penalty the IPO market may impose (the same is true with VC-backed companies). If defenses are generally bad for owner-managers of companies going public, it can only be because defenses decrease IPO prices, yet the correlations between defenses and underwriter reputation and between defenses and VC-backing both suggest that no "price penalty" is in fact imposed at the IPO stage if defenses are adopted. A lack of pricing penalty is also consistent with anecdotal reports from IPO participants, including investment bankers, venture capitalists, and lawyers from Wilson Sonsini (among other lawyers), who all uniformly report in

239. This analysis is also consistent with the fact that for Delaware companies that varied from default law, actual CIs exceeded Delaware's default CI by 183 on average.

240. See Mitchell & Mulherin, *supra* note 153, at 206 tbl.5.

241. Mitchell & Mulherin, *supra* note 153. See also *supra* Part IV.G.6 (illustrating ownership structure over five years post-IPO). In addition, even if post-IPO bid risk was more likely when pre-IPO industry-M&A activity was high, it is not clear why that makes defenses good. If defenses simply impede bids, they should harm IPO pricing, inducing fewer defenses on average; and if defenses improve value by providing bargaining power, high industry-M&A activity should make defenses less valuable, not more. Daines & Klausner, *supra* note 8, at 98-99.

conversations that conventional defenses do not affect IPO pricing.²⁴² If IPO pricing is so poor that IPOs fail to constrain owner-managers from adopting defenses in IPOs, IPO pricing must be getting worse, given that defenses are more common in 1998-99 than they were in 1991-92. In addition, both the positive correlation between law firm M&A proficiency and defense adoption and the negative correlation between Silicon Valley lawyers and defense adoption have declined in size and significance during the 1990s. This shift is more consistent with the idea that law firms generally (and Silicon Valley law firms in particular) recognize that defenses are a good idea for pre-IPO owner-managers than it is with the idea that defenses are bad for pre-IPO owner-managers or with the idea that defenses began as a bad idea and became good over time.

Overall, results are not consistent with the variable efficiency theories described in Part III that hold that defenses are a good idea for some owner-managers to adopt but not for others. The results fail to support the agency cost hypothesis: larger and older companies (save the very oldest) have more defenses, and neither free cash flow, leverage, nor post-IPO profitability have a significant relationship with defenses.²⁴³ Results are also inconsistent with the myopia hypothesis: development-stage companies are less likely to adopt defenses, and neither R&D intensity nor capital expenditures correlate significantly with defenses. The data also provide no support for the versions of the bargaining power hypothesis that posit variation in the value that defenses can add in the form of bargaining power: neither leverage nor shareholder dispersion are correlated with defenses, and the coefficient on M&A activity in a company's industry is strongly positive. Only the private benefits of control hypothesis receives some support, and results are mixed: the fact that older companies adopt more defenses is consistent with the hypothesis, as is the fact that companies founded by the CEO have more defenses than other companies. But the latter relationship is sensitive to other controls, and CEO tenure has no effect on defenses.²⁴⁴ While it is possible that either bargaining power or private benefits of control may explain why defenses are a good idea for all pre-IPO owner-managers, and, thus, why increasing numbers of defenses are being adopted in the 1990s, this study finds no support for bargaining

242. Michael Price, a well-known and well-regarded mutual fund manager, writes: "In this market, [companies going public] could do anything [that is, adopt any takeover defenses] they want and get away with it." Carolyn Brancato et al., *The Institutional Investor's Goals for Corporate Law in the Twenty-First Century*, 25 DEL. J. CORP. L. 35, 58 (2000). My thanks to Larry Hamermesh for pointing out this quote.

243. Transformations of cash flow (log-normalization and exponentiation) also produced no results, nor are the non-results on cash flow sensitive to other controls. A variable truncated at zero to count only positive cash flow, a dummy set to one if cash flow were positive, and different post-IPO measurement periods all had no effect.

244. Cf. Daines & Klausner, *supra* note 8, at 108 tbl.6 (finding no strong correlation between CEO founders and defense adoption in their sample).

power and only modest support for private benefits in trying to explain the persistent variation in takeover defenses at the IPO stage.

Finally, the data suggest that dual class capital structures are qualitatively different from other types of defenses. Dual class structures do not correlate with other defenses; they do correlate with variables that proxy for private benefits of control (family ownership and companies that share names with ongoing owner-managers), which in turn do not correlate with other defenses; and dual class structures have declined over time, the opposite of the trend for other defenses. And the evidence that other types of defenses are also related to private benefits of control (CEO founders are more likely to adopt normal defenses) does not carry over to dual class structures.

CONCLUSION: IMPLICATIONS

Overall, the findings presented in this Article provide strong evidence that lawyers largely determine key terms in the "corporate contract," due to agency costs between owner-managers and their lawyers. The findings are also consistent with defenses being generally optimal at the IPO stage for pre-IPO owner-managers, but not all clients receiving that advice. Learning seems to have occurred: defenses have become both more common and more uniform in the 1990s, and one strong regional variation, the Silicon Valley effect, disappeared in that time. Still, variation in defenses that correlates with law firm M&A proficiency persists even as late as 1999.

These findings have implications for corporate law and finance, for contract theory, and for the legal profession. The most immediate and striking implications are for the legal profession. Problems of legal quality appear to afflict some of the highest-profile transactions and some of the best-paid lawyers. That implies that lawyer-client agency problems are serious, widespread, and perhaps even dangerous for many clients.²⁴⁵ Reputational bonds that law firms use to insure high quality appear weak at best. Silicon Valley law firms certainly had and have powerful brand names and hold themselves out as "corporate law" firms, yet they seem to have provided inferior advice to IPO clients on takeover defenses in the early 1990s. Advice about defenses was in all likelihood incidental to the reason such firms were retained. Takeover defense advice was, in essence, bundled with other services more important to clients. In retrospect, clients on average may still be content with their choice of lawyers.

Yet even if we convince ourselves that legal services for large corporations are second-best efficient (that is, efficient given existing regulation and natural barriers to competition), the existence of bundles of excellent

245. Cf. HAZARD ET AL., *supra* note 51, at 150 ("[M]arket probably operates quite well as a competence filter with regard to sophisticated clients such as large business corporations.").

and poor services even in that stratum of the legal profession suggests that much more transformation of the industry is to come. If lawyers cannot provide a complete package of products and services that meets client needs, nonlawyers will pick up the slack. Only tasks for which lawyers have a regulatory monopoly (such as litigation) are likely to remain distinct from the broader "knowledge market" that has been and almost certainly will be dominated by nonlawyers. Whether or not lawyers can or will want to compete in that broader market, the "transformation" of the American legal profession in the 1980s was just the beginning.²⁴⁶

The findings of this Article also raise questions about how courts and other lawmakers set default rules of contract law. If lawyer-client agency problems distort terms adopted in the context of public corporations and multimillion dollar stock offerings (where contract terms are public and legal mistakes available for all to see), it seems reasonable to expect that lawyer-client agency problems also distort terms set in contexts that generate lower levels of lawyer and client scrutiny. To reach judgments about which default rules are most efficient in a given context, lawmakers will often face a conflict between terms adopted by private parties who have good legal representation and those who do not. For academics studying private law empirically, a related implication is that lawyers or law firms may generally need to enter empirical models as a control or explanatory variable whenever the goal is to study something requiring legal advice or implementation.

At a minimum, serious lawyer-client agency problems increase the tension between a rule favoring majoritarian defaults, on the one hand, and a rule favoring a hypothetical bargain between two perfectly informed (or even well-informed) parties, on the other. If courts were to review an IPO sample from 1991-92, they would find both a high degree of heterogeneity in terms adopted and a majority of companies adopting relatively few defenses. The majoritarian outcome would accordingly be few defenses. But if the court were to infer what two well-informed parties would have agreed to based on the defenses adopted by companies advised by law firms with M&A proficiency, the court would reach the opposite conclusion.

A final set of implications, and the ones most germane to takeover defenses, should interest corporate legal and finance scholars. Simple "company-level" agency cost models of how and when defenses are adopted utterly fail to predict the control structures adopted in one of the most important moments in a firm's life-cycle (the IPO). At a minimum,

246. Cf. Gilson, *supra* note 43, at 893 (proposing that "familiar patterns of lawyer-client relations and important aspects of law firm structure can be usefully understood as responses to quality uncertainty concerning legal services," with an implication that structural change may be stimulated by changes in ability of or need for clients to evaluate quality of services).

the data suggest that defenses are optimal for pre-IPO shareholders to adopt at a large subset (and in 1998-99, a majority) of new firms. Given the findings that companies advised by law firms with more M&A proficiency, higher-quality underwriters, and VC funds are all more likely to adopt defenses and that pre-IPO defenses are more common now than in the past, it seems more plausible that such defenses are optimal for all firms than it is that they are optimal for none. It is still possible for defense opponents to argue that defenses are not a good idea for some companies, but opponents now have the burden of identifying which companies those are and why defenses are not good for those companies, and making an empirical case to support their claims.

It is also possible, of course, for defense scholars to concede that defenses are privately optimal for all pre-IPO shareholder-managers to adopt, but insist nonetheless that they reduce both firm value and social welfare. But that position entails abandoning either the theory that IPO pricing is efficient or the theory that contracting at the IPO stage involves substantial externalities that leave room for efficient mandatory rules even at the IPO stage.²⁴⁷ Either concession thus calls into question many premises on which conventional corporate scholarship (including hostility to defenses) has been built. If IPO pricing is generally poor, can we infer anything about the governance terms not found in corporate charters? Unseen terms like bans on insider trading, "other constituency" provisions, or even codetermination²⁴⁸ all become candidates as efficient terms. If IPO pricing is poor, do we expect secondary market pricing to be better? If so, how and why, precisely? If not, then high-premium bids are not indicators of more fundamentally efficient owners of targets' assets, nor are they necessarily good measures of current firm value.

The argument and findings presented in this Article do not fully resolve the many questions surrounding takeover defenses. Nevertheless, an answer to half of the IPO defense puzzle now seems clear: variation in legal takeover defense vulnerability at the IPO stage is explained in large part by variation in the quality of legal advice provided to pre-IPO owner-managers. The evidence also seems compelling that defenses are

247. One could maintain both that IPO pricing was efficient and that defenses were at once privately optimal and socially inefficient by accepting that some terms fixed at the IPO entail externalities. See Lucian A. Bebchuk & Luigi Zingales, *Corporate Ownership Structures: Private Versus Social Optimality*, John M. Olin Center for Law, Economics, and Business, Harvard Law School (Discussion Paper No. 181, 1996). But that position, too, would call into question much conventional law and economics scholarship on corporate law. E.g., FRANK EASTERBROOK & DANIEL FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 25-30 (1991) (noting that the likelihood of externalities when charters are chosen is minimal).

248. Codetermination is the inclusion of representatives of nonshareholder constituencies (usually employees) on the board. See generally Katbarina Pistor, *Codetermination: A Sociopolitical Model with Governance Externalities*, in *EMPLOYEES AND CORPORATE GOVERNANCE* 163 (Margaret M. Blair & Mark J. Roe eds., 1999) (discussing co-determination in Germany).

privately optimal for all pre-IPO owner-managers, even if not all lawyers provide that advice. In sum, blame the lawyers.

APPENDIX A
GOVERNANCE TERMS REGULATING CONTROL OVER PUBLIC
CORPORATIONS WITHOUT CONTROL SHAREHOLDERS

*Fixed Governance Terms—Mandatory Federal
Securities Law and Practice*

1. Tender offers must remain open for twenty business days.
2. Proxy solicitations must be “precleared” by the SEC, which takes thirty to forty-five days.

Fixed Governance Terms—Mandatory Nonvarying State Corporate Law

3. All corporate power is held by the board, not by shareholders.
4. Neither the board nor shareholders may amend the charter unilaterally.

Varying Governance Terms—Varying and/or Default State Corporate Law

5. Do directors have the power to create “poison pills,” which limit shareholders from acquiring more than 5-30% of the company’s stock?
6. Does the board have terms of one, two, or three years?
7. How frequently must the board call an annual meeting of shareholders?
8. May shareholders act by written consent in lieu of a meeting?
9. May less than 51% of shareholders call a special meeting? May less than 10%?
10. May shareholders remove directors without cause?
11. May shareholders fill vacant board seats?
12. May shareholders increase the size of the board?
13. May shareholders amend the bylaws without board action?
14. May shareholders “cumulate” their votes?
15. Does the board have “blank check” authority to issue preferred stock?

APPENDIX B

AN INDEX OF (LEGAL) CONTESTABILITY

Rather than studying individual antitakeover defenses in isolation, or aggregating them in ways not motivated by theory, as prior research has done, the contestability index described below unifies governance terms in a tractable system by asking a simple question: how much delay would a firm's governance terms impose on a majority shareholder coalition that desired to change the composition of a majority of the board?

The index consists of two components: a set of variables that derive from a company's governance terms, and an algorithm that transforms those variables into a single number. The description of the index proceeds as follows: First, the law that establishes rules included in the index is first generally discussed. Second, the primary governance variables are discussed and formally defined. Third, a number of instrumental variables are constructed, and each is discussed and formally defined. Fourth, the algorithm is presented, consisting of seven mutually exclusive cases that take as inputs certain of the primary or constructed variables and produce as outputs the contestability index. Finally, two brief sets of illustrations are given.²⁴⁹

I

OVERVIEW OF GOVERNANCE TERMS

Every public company has a set of "governance terms" that regulate how easily shareholders can assert control rights over the company. Terms are set forth in (1) U.S. federal securities law, (2) the corporate code of the state where a firm is incorporated, and (3) firm-specific terms, consisting of (a) of securities issued by the firm, (b) the firm's charter, and (c) the firm's bylaws. Governance terms vary by firm, because firm founders choose where to (re)incorporate, and thus default law, and most state corporate laws provide considerable (if not total) flexibility for firms to vary from default law in their charters and bylaws.²⁵⁰ Federal securities

249. One caveat is in order: Although the contestability index is simple in concept, the devil is in the details; as many practitioners will attest, legal innovations, case law developments, or legislative or regulatory action will almost certainly eventually render some of what follows obsolete over time. Despite this caveat, readers should take some comfort from the fact that little of what follows is new or has changed since (at least) the late 1980s.

250. In general, conflicts between terms are resolved in the same order. Federal securities laws override conflicting state corporate codes (because of the Supremacy Clause of the U.S. Constitution, U.S. CONST. art. VI, cl. 2); state corporate codes override conflicting terms of individual firms' securities; such terms typically override conflicting charter terms (because the specific overrides the general); and charter terms typically override bylaws. However, many state corporate provisions govern only in the absence of overrides in the charter or bylaws, as specified in the state law, and the decision of whether or not two terms conflict is itself often a matter of some debate. See, for example, the debate over whether the Williams Act conflicted with (and therefore pre-empted) state takeover laws, an issue that resulted in two U.S. Supreme Court decisions and a plethora of lower federal court decisions, all reviewed in John C. Coates IV, *State Takeover Statutes and Corporate Theory: The Revival of an Old*

laws, by contrast, apply generally to all "public" companies, including all firms with equity securities listed on a stock exchange and all firms with \$10 million in assets and 500 or more shareholders.²⁵¹ Terms imposed by federal law are contained in the Securities Exchange Act of 1934, which governs both proxy solicitations and tender offers, and the rules and interpretations of the Securities and Exchange Commission adopted thereunder, and the most important of those terms are summarized in Appendix A. (How and why each of these terms may be important will become evident in the presentation of the index below.)

State laws impose a large number of governance terms on firms, usually (but not always) as default terms. State corporate codes, for example, typically set mandatory rules concerning how frequently shareholders must meet, but default law governs how the number of directors on the board is set. Many rules vary from state to state, but two important ones do not: (1) corporate statutes always provide that boards, not shareholders, manage the corporation, thus requiring shareholders to go through the board selection process to seize working control of the firm; and (2) corporate statutes in all states effectively give both the board and shareholders veto power over charter amendments, so that a majority of both groups is required for charter changes.

Since there is no formal limit to the length or complexity of firm-specific terms, the result is (in theory) an infinite number of corporate governance terms. In practice, transaction costs and simple exhaustion of variations in governance structures put a ceiling on the number of terms applicable to any given firm. Even fewer will plausibly have a material effect on takeovers. For the vast majority of companies, firm-specific governance terms were limited to approximately twelve primary categories, of which two (director indemnification or exculpation and standard contingent voting rights for ordinarily nonvoting preferred stock) would not plausibly have an effect on takeover fights, leaving ten legally significant categories of primary terms, listed in Appendix A.

II

CONTESTABILITY ALGORITHM

Despite the large number of variations, a relatively simple algorithm can reduce nearly all significant governance terms to a single continuous²⁵²

Debate, 64 N.Y.U. L. Rev. 806 (1989). One might not predict conflicts between or among firm-specific terms at a given firm, since those drafting and adopting the terms would presumably not want to create uncertainty or an opportunity for litigation, but straightforward conflicts are surprisingly common.

251. See Securities Exchange Act of 1934 § 12(g) (codified at 15 U.S.C. § 781 (1988)); see also SEC Rule 12g-1, 17 C.F.R. § 240.12g-1 (1987).

252. Technically, the contestability index is not a continuous variable. It is bounded from below by zero, and in the real world does not take on noninteger values. In this respect, however, it is not different from using salaries or other dollar-denominated variables as dependent variables, which are also bounded from below by zero and discrete below some threshold of size. In general, however, the CI should function as a continuous variable over plausible ranges of predicted values.

variable (expressed in days). This time-to-takeover variable—the “contestability index” (“CI” or “index”)—abstracts from many factors that have been plausibly assumed to affect the contestability of corporate control: ownership structure, firm size, and profitability, bidder characteristics, management quality, industry-specific regulation, etc. Nevertheless, the variable captures the way that bidders, practitioners, and arbitrageurs think about the effect of securities and corporate law and firm-specific governance terms on the relative difficulty of a takeover for a given company, and impounds the effects of fifteen different legal rules into a single, easy-to-grasp metric.²⁵³

The algorithm can be described in two parts: (1) analysis of terms and definition of variables, and (2) determination of the index.

A. Analysis of Terms

First, governance terms are analyzed to define variables needed for determination of the index. Most variables are readily determinable from a firm’s charter or bylaws (“primary variables”). Others are constructed from one or more of such primary variables.

1. Primary Variables

Determination of the index depends straightforwardly on a number of governance terms. A number of categorical variables, set forth in Table B-1, are set equal to “1” if relevant provisions are expressly contained in the firm’s charter or bylaws, “0” if they are expressly denied or prohibited in the firm’s charter or bylaws, and set equal to “9” if the charter and bylaws are silent.²⁵⁴ In addition, a bounded continuous variable “SEATS” is defined as the number of board seats of the firm, determined by reference to the most recent relevant SEC filing (typically the most recent regular proxy statement). Table B-1 also sets forth where the primary variables enter into either other variable definitions or the algorithm itself.

253. It is not suggested that the use of formal definitions and the algorithm described below are specifically used by practitioners. In some respects, there is a tension between arriving at a formal, tractable measure of legal takeover vulnerability for a large number of firms at multiple points in time for research and analytical purposes and the task before practitioners or arbitrageurs, which is to assess the legal takeover vulnerability of a specific company at a specific (if moving) point in time. What follows, for example, will be too precise for many purposes, and not precise enough for other purposes. Nevertheless, the description that follows is a fairly close description of what is done in law firms, investment banks, and hedge funds whenever a given public company is put “in play.”

254. If relevant provisions are contained in both charter and bylaws, and are contradictory, then the conflicts are resolved as discussed *supra* note 2.

TABLE B-1
PRIMARY GOVERNANCE VARIABLES FOR CONTESTABILITY INDEX

Categorical Variables		
Variable	Where Variable Enters	Definition of Variables
		“0” if expressly prohibited in firm documents, “1” if expressly permitted in firm documents, “2” if documents are silent
BLANK	Definition of PILLBAN	Directors are given “blank check” authority to set terms of preferred stock
REMOV	Definition of COUP	Shareholders are permitted to remove directors
NUMSET	Definition of COUP	Shareholders are permitted to set the number of directors
CLASS	Definition of COUP; Cases 5, 6 & 7	The board is classified into multiple classes
CONSENT	Definition of EARLY; Case 2	Shareholders are permitted to act by written consent.
SM10	Case 3	>10+% of shareholders are permitted to call special meetings
SM50	Definition of EARLY; Case 4	>50+% of shareholders are permitted to call special meetings
CUMUL	Cases 6 & 7	Shareholders can vote cumulatively in director elections
VAC	Definition of COUP	Shareholders are permitted to fill vacancies

TABLE B-1 (CONT'D)
PRIMARY GOVERNANCE VARIABLES FOR CONTESTABILITY INDEX

Additional Categorical Variables		
STATE	Definitions of COUP and EARLY	A firm's state of incorporation
ANNUAL	Cases 5, 6 & 7	See Appendix C
WORK-AROUND	Definition of COUP	= "0" if charter or bylaws impose supermajority requirements on bylaw amendments, else = "1"
Continuous Variable		
SEATS	Definition of HOLD	Total number of board seats, including vacancies

The only exceptions to this scheme are the variables "STATE," "ANNUAL," and "WORKAROUND." "STATE" is simply a firm's state of incorporation, which determines shareholder power over board selection, both as a default and a mandatory matter, as discussed more below. "ANNUAL" is the number of days that may elapse between annual shareholder meetings before shareholders can compel another; this varies from state to state, as set forth in Table B-5. "WORKAROUND" is defined as "0" if relevant provisions of the charter or bylaws impose supermajority requirements on bylaw amendments by shareholders, and "1" otherwise.²⁵⁵ Shareholders are permitted to amend the bylaws in all states.²⁵⁶ Absent charter or shareholder-approved bylaw terms raising the shareholder vote required to amend the bylaws,²⁵⁷ a majority of determined shareholders will

255. Additional variables "WORKAROUND-67" and "WORKAROUND-80" could be defined to take account of the possibility that a bidder or dissident shareholder group could obtain the necessary supermajority votes to meet supermajority requirements of 67% or 80%. For the basic index, however, it is assumed that if a vote of greater than 50% is required, the vote cannot be obtained.

256. See REV. MODEL BUS. CORP. ACT annot. § 10.20(b) (1998); DEL. CODE ANN. tit. 8, § 109 (1991).

257. Even such limitations on shareholder bylaw amendment power are of uncertain legality in Delaware and many other states. For purposes of the index, close questions such as this will generally be resolved against shareholders on the theory that bidders will generally want to have a clear legal path to bid victory before launching an expensive takeover bid. Thus, the following analysis assumes that such charter or shareholder-approved bylaw provisions restricting bylaw amendments by shareholders are legal. There is the further possibility that boards could (under concurrent bylaw amendment power typically granted in the charter) amend the bylaws to add supermajority vote requirements on future

be able to “work around” any terms found in the bylaws that slow or interfere with their taking control of the board. In particular, terms commonly found in the bylaws include terms (a) specifying the number of directors, or providing that the number may be set only by the board, (b) limiting the circumstances under which directors may be removed to “cause” only, and (c) limiting the right to fill vacancies to the board. Some firms attempt to provide for staggered boards in their bylaws, something prohibited in most states, and permitted in Delaware only in initial or shareholder-approved bylaws. Other firms attempt in their bylaws to limit shareholder rights to call special meetings or act by written consent, despite the fact that default law in most states permits such rights to be limited only in the charter. Even where such provisions are legal, shareholders can work around such provisions by successively amending the bylaws and then taking whatever action would have otherwise been prohibited. By and large, such workarounds can be accomplished in little more than the time normally required for a proxy fight.

Where firm-specific governance terms are located can be important in evaluating the takeover vulnerability of a given firm. Table B-2 sets forth several categorical variables are determined by inspecting a firm’s charter and bylaws, each variable set to “1” if the relevant governance term is located in the charter, “2” if located in the bylaws, and “0” if no express term exists.

Finally, variables relating to a firm’s authorized and issued capital stock are determined by reference to the charter and the most recent relevant SEC filing prior to the date with respect to which the index is being determined. Table B-3 sets forth these variables and their definitions. Each variable equals the relevant number of shares:

In addition to the foregoing primary variables, a number of additional, more complex variables are constructed on the basis of the primary variable. Each of these variables is separately discussed below. Table B-4 sets forth these variables, as well as their formal definitions. Table B-4 also lists where these variables enter into the algorithm.

bylaw amendments by shareholders. This sort of restriction, too, has been enjoined by the one court that has considered the question, seems on its face highly unlikely to survive legal challenge, and so will not be considered in the following analysis. *Burkhart v. Smith*, 157 A.299 (Md. 1931).

TABLE B-2
LOCATION VARIABLES FOR CONTESTABILITY INDEX

Variable	Where Variable Enters	Definition of Variables: "0" if documents are silent, "1" if express provision in charter, "2" if express provision in bylaws
BLANKLOC	Definition of PILLBAN	Location of term granting black check authority
REMLOC	Definition of COUP	Location of term restricting shareholder ability to remove directors without cause
NUMLOC	Definition of COUP	Location of term restricting shareholder ability to set number of directors
STGLOC	Definition of COUP	Location of term establishing staggered board
CONLOC	Definition of EARLY	Location of term prohibiting shareholders from acting by written consent
SMLOC	Definition of EARLY	Location of term imposing higher levels of shareholder call for special meetings
VACLOC	Definition of COUP	Location of term restricting shareholder ability to fill vacancies

TABLE B-3
CAPITAL STOCK VARIABLES FOR CONTESTABILITY INDEX

Variable	Where Variable Enters	Definition of Variables
CSAUTH	Definition of PILLBAN	Number of shares of authorized common stock
CSOUTST	Definitions of PILLBAN and HOLD	Number of shares of outstanding common stock
PSAUTH	Definition of PILLBAN	Number of shares of authorized preferred stock (aggregating all classes)
PSOUTST	Definition of PILLBAN	Number of shares of outstanding preferred stock (aggregating all classes)
INSIDE	Cases 6 & 7	Number of common shares beneficially owned by directors and officers

TABLE B-4
CONSTRUCTED VARIABLES FOR CONTESTABILITY INDEX

Variable	Where Variable Enters Algorithm	Definition of Variables
PILLBAN	Case 1	= "1" if CSAUTH < 2 * CSOUTST or [PSAUTH – PSOUTST > 1 and BLANK = 1 and BLANKLOC = 1], else = "0"
EARLY	Cases 5, 6 & 7	For firms in the following states: IN, MN, NY = "1" if (CONSENT = 1 and CONLOC = 1) or (SM50 = 1 and SMLOC = 1), else "0" For firms in the following states: DE, FL, GA, IL, MI, NJ, NV, OK, and WI = "0" if CONSENT = 0 and CONLOC = 1, else = "1" For other firms: = "0" if SM50 = 0 and SMLOC = 1, else = "1"
COUP	Cases 2, 3, 4, 5, & 7	See Appendix B
HOLD	Cases 6 & 7	$= \{ [\text{SEATS} / (3 * \text{SEATS} + 9)] + [5 / (3 * \text{CSOUTST})] \} / \text{CSOUTST}$

2. Pill Bans

If a firm either has explicitly or implicitly adopted a prohibition against a poison pill in its charter, then the firm cannot adopt a poison pill, and no further analysis of terms is needed. Here the point is not whether a firm has a pill at any given point in time, since the presence or absence of a pill is almost always irrelevant to a firm's takeover vulnerability. Rather the point is whether the firm has the ability to adopt a pill in the future.

Explicit bans on pills are relatively simple to imagine, although they are so rare as to be almost nonexistent for research purposes. (Their rarity must be one of life's great mysteries to those who believe that pills are uniformly and generally harmful to shareholder value.) Charter prohibitions on pills would clearly be legal in Delaware and under the RMBCA.²⁵⁸ Explicit prohibitions on pills contained in bylaws are legal in Oklahoma,²⁵⁹ illegal in Georgia,²⁶⁰ and are unlikely to be found legal in Delaware.²⁶¹ For firms in states in which bans on pills contained in bylaws are legal, no further analysis of terms is needed; the index is given in Case 1 under "Determination of Index" below.

Implicit bans on pills may arise as a result of the relationship between a company's outstanding and authorized capital stock. In general, for a pill to sufficiently dilute a bidder to make it a meaningful deterrent to a hostile bid, a firm needs to have at least twice the number of authorized common shares than it has outstanding. Suppose, for example, that a firm has 100 shares outstanding, and 120 authorized. It adopts a pill, which at most can result in the issuance of 20 more shares. Suppose the pill trigger is 10%. The bidder buys 11 shares, the pill is triggered, and all other shareholders exercise their rights. The result is that the bidder's ownership and voting rights are diluted from 11% to 9%. Clearly this will not normally be a meaningful takeover deterrent. At 200 authorized shares, the bidder can be diluted down to 5.5%, and at 300, 3.7%. Calculating economic dilution is more complicated, and economic dilution can have deterrent effects even if voting dilution is not significant, but generally speaking "the key driver [of the deterrent effect of the pill] is the flood of new shares issued upon exercise [of the pill],"²⁶² so that when the "flood" is constrained by a low

258. See DEL. CODE ANN. tit. 8, §§ 102, 141, 157 & 242 (1991 & Supp. 1998); REV. MODEL BUS. CORP. ACT §§ 2.02, 6.24, 8.01 & 10.03 (1998).

259. See FLEMING, *supra* note 40. Given this decision, and given the ability of a majority of shareholders in all fifty states to adopt bylaw amendments without board concurrence or approval, the index of all firms incorporated in Oklahoma is effectively thirty.

260. See *Invacare Corp. v. Healthdyne Techs., Inc.*, 968 F. Supp. 1578 (N.D. Ga. 1997).

261. See Lawrence A. Hamermesh, *Corporate Democracy and Stockholder-Adopted Bylaws: Taking Back the Street?*, 73 TUL. L. REV. 409 (1998); Charles F. Richards, Jr. and Robert J. Steam, Jr., *Shareholder By-Laws Requiring Boards of Directors to Dismantle Rights Plans Are Unlikely to Survive Scrutiny Under Delaware Law*, 54 BUS. LAW. 607 (1999).

262. Robert Bruner carefully analyzes the various effects of various types of pills there and, consistent with the analysis here, characterizes as "weak" but effective a pill that results in the issuance of 3x pretrigger outstanding shares. See ROBERT BRUNER, *THE POISON PILL ANTI-TAKEOVER*

level of authorized but unissued shares, the deterrent effect of a pill will be greatly weakened.

This analysis, however, is complicated by the possibility of fraction-alizable preferred shares serving as synthetic common shares. Based on IRRC data as of December 31, 1998, more than 90% of public companies have adopted charter provisions giving boards "blank check" authority to issue preferred stock as needed without further shareholder approval, and preferred stock may be issued in lieu of common stock, making limits on common stock in the charter irrelevant for purposes of implicit prohibitions on pills. Even limits on the number of preferred shares that may be issued pursuant to such authority are generally non-binding, because each share preferred can be "fractionalized"—that is, issued in fractional units, with each fractional unit being given (pursuant to the "blank check" authority) rights equivalent to a single common share (with the result being that each whole preferred share has rights equivalent to large multiples of a single common share). Suppose again there are 100 common shares outstanding, 120 common shares authorized, but now 10 shares of "blank check" preferred stock authorized and unissued. The board can authorize the issuance of preferred shares with 10x normal common stock rights (voting rights and rights to participate in dividends and other distributions), and then adopt a pill consisting of rights to purchase 1/10 of a share of preferred stock. The bottom line is as if the 10 shares of preferred had been converted into 100 shares of common stock for purposes of the pill, restoring (marginal) deterrent effect to the pill.

Thus, for an implicit ban on pills to be effective, the firm needs to (a) have authorized common stock equal to less than 200% of its current outstanding and (b) either not have granted blank check authority or have granted blank check authority subject to constraints on fractionalization of preferred stock. Although uncommon, about 5% of public companies fall in this category, based on a sample of 165 firms that went public in 1990-92. As with explicit bans on pills, no further term analysis is needed for such firms, and the index is given in Case 1 under "Determination of Index" below.

Formally, a variable "PILLBAN" should be set equal to "0" unless either of the following is true, in which case, "PILLBAN" should equal "1": (1) the number of authorized common shares is at least 200% of the number of outstanding common shares

$$\text{CSAUTH} > 2 * \text{CSOUTST}$$

DEFENSE: THE PRICE OF STRATEGIC DETERRENCE 8 tbl.B-1 & 32 (1991) ("weak" pill effective deterrent with 2x exercise multiple and 2x purchase multiple, which at their weakest would be based on a purchase value double the expected future stock price, which results in issuance of [(purchase value / future stock price)+1] = 3).

or (2) there is at least one authorized but unissued preferred share and the charter gives the board "blank check" authority to set the terms of unissued preferred shares

PSAUTH - PSOUTST > 1 and BLANK = 1

3. *Coups via Removal or Board Packing*

Default law in most states, including Delaware, permits shareholders to remove directors without cause.²⁶³ Firms may attempt to restrict this ability,²⁶⁴ but if the restrictions are in the bylaws and shareholders are able to amend the bylaws, such restrictions can be "worked around" (as discussed above). Removal power gives shareholders the ability to mount a "coup" rather than waiting for regularly scheduled elections of directors. Directors can simply be removed and replaced.²⁶⁵ Default law in every state except Massachusetts and Ohio permits shareholders to fill vacancies.²⁶⁶

If the firm has a staggered board, then default law in Delaware and a few other states (Kansas, Texas, and Maryland) permit shareholders to remove directors only with cause or as otherwise provided expressly in the charter. Thus, at firms with staggered boards in these states, a coup is only possible via removal if the charter expressly permits.

A shareholder "coup" may also be possible by "packing the board." If shareholders are (a) permitted to set the number of directors and (b) fill

263. The only exceptions are New Jersey, which permits removal without cause only if the charter expressly permits, and New York and Texas, which permit removal only if the charter or bylaws expressly permit. In addition, Maine, Montana, and Nevada require a two-thirds vote to remove directors without cause, as a matter of default law.

264. Delaware law does not appear to permit any restrictions on removal by shareholders at firms that do not have staggered boards, whether in the charter or bylaws. DEL. CODE ANN. tit. 8, § 141 (1991 & Supp. 1998). Outside Delaware, charter restrictions would appear to be valid under the RMBCA, but for the same reason (*inclusio unius est exclusio alterius*), the legality of restrictions on removal contained in the bylaws is doubtful. Because of the ability of shareholders to "work around" restrictive bylaws at most firms, the issue will not often be of significance. Such bylaws are presumed invalid for the rest of the analysis.

265. It might seem that power to fill those vacancies is also necessary for an effective coup to be carried out; however, in Delaware, if at the time of filling any vacancy, the directors in office constitute less than a majority of the whole board, the Chancery Court may upon application by 10% shareholders order an election. DEL. CODE ANN. tit. 8, § 223(c) (1991 & Supp. 1998). Thus, if shareholders can remove the entire board in one fell swoop, a coup can be mounted even if they do not technically have the power to fill vacancies. A similar outcome could be expected even in states that do not expressly provide for such an emergency election.

266. As with removal restrictions, charter restrictions on vacancy filling by shareholders are valid under RMBCA section 8.10, and for that reason bylaw restrictions are not. *See supra* note 23. By contrast, the DGCL gives the power to fill vacancies as a default matter to the directors; the shareholder right to fill vacancies is a common law right, *Moon v. Moon Motor Car Co.*, 151 A. 220 (Del. Ch. 1930); *Campbell v. Loew's, Inc.*, 134 A.2d 852 (Del. Ch. 1957). Vacancy filling powers could thus presumably be restricted in the charter or bylaws of a Delaware firm, although bylaw restrictions have never been tested. EDWARD P. WELCH & ANDREW J. TUREZYN, *FOLK ON THE DELAWARE GENERAL CORPORATION LAW: FUNDAMENTALS* 485 (1993). Again, shareholders can "work around" the absence of express authority to fill vacancies at most firms by adopting a bylaw giving them that authority.

the newly created and vacant board seats, they can increase the size of the board by the number of existing seats plus one, and then fill those newly created vacancies, thereby taking control of a majority of the board. Default law in every state provides that the number of directors is to be set as specified in the charter or bylaws; thus, as a default matter, board packing may not be permitted. However, shareholders not only may "work around" bylaw restrictions on setting the number of directors, they may also give themselves express authority to set the number.

In general, the variable "COUP" is set equal to "1" unless both (a) removal is blocked and (b) board packing is blocked, in which case the variable is set equal to "0." Formally defining a variable to represent shareholder "coup" power is complicated by state-by-state variations, and the full definition of "COUP" is set out in ANNEX B-1.²⁶⁷ Formal definitions for Delaware firms, and for firms in the majority of states that follow the RMBCA, are set out there.

At Delaware firms, for removal to be blocked, the charter must (a) provide for a staggered board and (b) prohibit or remain silent on removal. Delaware law does not allow the bylaws to permit removal at firms with staggered boards, and at firms without staggered boards, removal appears to be a rare mandatory term that cannot be varied either in the charter or bylaws.²⁶⁸ For board packing to be blocked at Delaware firms, one of three things must be true: (i) vacancy filling by shareholders must be prohibited in the charter or bylaws, and if the latter, the bylaws must require a supermajority vote to be amended by shareholders; (ii) the charter fixes (or prohibits the changing by shareholders of) the number of directors, or (iii) the bylaws fixes (or prohibits the changing by shareholders of) the number of directors, and bylaw amendments require a supermajority vote.

For firms that follow the RMBCA, for removal to be blocked, the charter must prohibit removal; as with the DGCL, the RMBCA does not permit removal to be restricted in the bylaws.²⁶⁹ For board packing to be blocked at RMBCA firms, one of three things must be true: (i) vacancy filling by shareholders must be prohibited in the charter;²⁷⁰ (ii) the charter fixes (or prohibits the changing by shareholders of) the number of directors, or (iii) the bylaws fix (or prohibits the changing by shareholders of) the number of directors, and bylaw amendments require a supermajority vote.

267. As with workarounds, additional variables "COUP-67" and "COUP-80" could be added to account for possible supermajority requirements.

268. See DEL. CODE ANN. tit. 8, § 141.

269. REV. MODEL BUS. CORP. ACT § 8.08 (1998).

270. See *supra* note 25.

4. *Early Shareholder Action*

To bring a “coup,” shareholders must be able to act. Normally, they can act only at annual meetings, which occur every 12-18 months or so. Shareholders can accelerate the process of electing directors, however, if (as at the majority of firms) they can call and then act at a special meeting, or if they can act by written consent “in lieu of” a meeting.

Default law in Delaware and a few other states (including Florida, Illinois, Michigan, and New Jersey) provides for shareholder action by written consent, and permits restriction of this power only in the charter, not the bylaws.²⁷¹ States that follow the RMBCA allow shareholder action only by unanimous written consent, which for public companies is effectively a prohibition.²⁷² On the other hand, while Delaware does not permit shareholders to call a special meeting as a default matter, the RMBCA allows more than 10% of shareholders to call a special meeting. The RMBCA rule may be mandatory, but in any event it permits supermajority requirements only in the charter, not in the bylaws.²⁷³ Only in three states (New York, Minnesota and Indiana) are shareholders not given the ability to act “early” as a matter of default law. Some states raise the percentage of shareholders required to call a special meeting to higher levels, such as 25% (Georgia and Ohio), or permit companies to raise the levels in the charter (often up to some maximum, such as in Ohio and Texas, which permit the charter to raise the level to 50%).

Formally, for firms in Delaware or states that follow Delaware on action by written consent (see Table B-4), the variable “EARLY” is set equal to “1” unless the charter expressly prohibits or imposes supermajority requirements on shareholder action by written consent

CONSENT = 0 and CONLOC = 1

in which case they are set equal to “0.” For firms that follow the RMBCA (see Table B-4), the same variables are also set equal to “1” unless the charter expressly prohibits or imposes supermajority requirements on shareholders calling special meetings,

SM50 = 0 and SMLOC = 1

271. DEL. CODE ANN. tit. 8, § 228 (1991 & Supp. 1998); REV. MODEL BUS. CORP. ACT § 7.04 (1998).

272. Thus, workarounds are not relevant to consent prohibitions. Outside Delaware, consents must be expressly permitted. In Delaware, consent prohibitions must be in the charter to be effective, which shareholders cannot change without board concurrence. *See supra* note 23.

273. Thus, workarounds are not relevant to prohibitions on shareholder rights to call special meetings. In Delaware, special meeting calls by shareholders must be expressly permitted. Outside Delaware, prohibitions on and supermajority requirements for special meeting calls by shareholders are either illegal or must be in the charter to be effective, which shareholders cannot change without board concurrence. *See supra* note 25.

in which case those variables are set equal to "0."²⁷⁴ For firms in New York, Minnesota, and Indiana, "EARLY" is set equal to "0" unless CONSENT = 1 and CONLOC = 1.

5. *Annual Meeting Requirements*

With one or two exceptions (designed primarily for mutual fund companies), state corporate codes all require firms to hold annual meetings of shareholders, whether or not requested by shareholders. State laws, however, vary considerably in how much leeway they permit in when an annual meeting is required. At one extreme, for example, Nevada requires annual meetings every twelve months; at another extreme, Pennsylvania requires annual meetings to be held within six months of the time designated for the meeting in the firm's charter or bylaws, with at least one in every calendar year, a formulation that can permit up to eighteen months of delay between meetings; and Delaware requires annual meetings within thirteen months of the last held meeting. Because the variation in these requirements can have a substantial effect on how long takeover fights can last, they are reflected in the index.

Formally, a variable "ANNUAL" is constructed by reference to state law, taking on the values reflected in Table B-5.

274. As with workarounds and coups, additional variables "EARLY-67" and "EARLY-80" could be added to the analysis. Again, supermajority requirements on early action appear to be rare.

TABLE B-5
MAXIMUM DAYS BETWEEN ANNUAL MEETINGS

<u>State</u>	<u>Days</u>	<u>State</u>	<u>Days</u>	<u>State</u>	<u>Days</u>
Alabama	450	Louisiana	390	Ohio	390
Alaska	390	Maine	390	Oklahoma	390
Arizona	390	Maryland	390	Oregon	420
Arkansas	420	Massachusetts	420	Pennsylvania	540
California	450	Michigan	450	Rhode Island	390
Colorado	420	Minnesota	450	South Carolina	510
Connecticut	420	Mississippi	420	South Dakota	390
Delaware	390	Missouri	390	Tennessee	420
Florida	390	Montana	420	Texas	390
Georgia	420	Nebraska	390	Utah	450
Hawaii	390	Nevada	540	Vermont	420
Idaho	450	New Hampshire	390	Virginia	450
Illinois	420	New Jersey	390	Washington	420
Indiana	420	New Mexico	390	West Virginia	390
Iowa	420	New York	390	Wisconsin	420
Kansas	390	North Carolina	420	Wyoming	420
Kentucky	420	North Dakota	390		

Notes: Most state corporate statutes expressly provide that a court may order an annual meeting if one has not been held within a designated time. In many states, the specified time is the earlier of some number of months after the end of the fiscal year or some number of months after the last annual meeting. For such states, it is assumed (as is most common) that the last annual meeting was held within four months of the end of the fiscal year (i.e., by the end of April following a December 31 fiscal year end). Thus, in state like North Carolina, which provides for a court-ordered meeting if none has been held before the earlier of six months after the end of the fiscal year or 15 months' after its last annual meeting, it is assumed that the appropriate cut-off is June 30, six months after the most common fiscal year end, which will be approximately 420 days after the last annual meeting.

New York does not provide in its statute for court-ordered annual meetings, but recognizes a common law right of shareholders to compel a meeting. *Auer v. Dressel*, 306 N.Y. 427 (1954). No statutory or case law could be found in Alaska, Louisiana, Maine, Maryland, Minnesota, Missouri, North Dakota, Ohio, Oklahoma or Pennsylvania. However, given that 48 states require annual meetings, courts are assumed to be willing to rely on equitable powers to compel a meeting if one is not held. The two states not requiring annual meetings are Minnesota and North Dakota; Minnesota provides that if none held within 15 months, 3% of shareholders may demand a meeting. For states that do not statutorily provide for a court-ordered meeting, a 390-day period is assumed, on the theory that a court would be reluctant to force a meeting until at least a full year had passed, and the practicalities of distributing proxy material required by the SEC for all shareholder meetings would make holding one earlier than 30 days after the anniversary of the last meeting unlikely. An exception is Pennsylvania, which specifies a meeting must be held within six months of the date designated therefor, which should give a target company at least six months after the last annual meeting before a court would intervene.

6. *Cumulative Voting and Staggered Boards*

For firms with staggered boards, cumulative voting may add delay to a takeover.²⁷⁵ Whether or not delay is added depends on whether or not insiders own enough stock, or can persuade enough unaffiliated shareholders to vote with them, so as to use the ability to cumulate votes and hold onto one seat per election. For firms with staggered boards and a small enough number of board seats relative to the number of accumulated voting power of the insiders, this effect may delay a takeover. The minimum number of voting shares necessary for directors and officers to retain one seat ("HOLD") depends on the number of board seats (SEATS or "B" in the following formula) and the number of outstanding voting shares (assumed to equal common shares outstanding, CSOUTST, or "S" in the following formula), as follows:

$$\text{HOLD} = [(B / (3B + 9)) + (5 / 3S)] / S$$

The formula reflects the classic cumulative voting formula for how many shares incumbent managers need to elect N' directors, given that N directors are to be elected at the next meeting, and S shares outstanding.²⁷⁶ It also reflects the additional constraint that incumbents need to elect at least $B/3$ directors at each annual meeting to be able to stretch out their incumbency to a total of three meetings, rather than only two.

B. *Determination of Index*

With these definitions in hand, the contestability index can be calculated. The following calculation can be readily programmed into standard spreadsheet programs using the foregoing analysis of terms and definition of variables. There are seven mutually exclusive cases.

Case 1 If $\text{PILLBAN} = I$, then $\text{CI} = 30$

If the company cannot adopt a poison pill, then the index equals 30, which is the minimum tender offer period under the Williams Act, plus 2-5 days for preparation. The remaining cases assume the firm can adopt a poison pill.

275. See *supra* note 187.

276. The number of shares, X , needed to elect N' directors, given that N directors are to be elected and S shares are outstanding, is given by the following classic formula: $X = (S + N' + 1) / (N + 1)$. See R. CLARK, CORPORATE LAW 363 (1986).

Case 2 If PILLBAN = 0, COUP = 1, and CONSENT = 1, then CI = 45

If the shareholders can act by written consent and can mount a “coup,” then the index equals 45, which is the minimum period of time practically necessary to prepare and clear consent solicitation materials with the SEC under the federal proxy rules, circulate the materials, and file them with the firm.

Case 3 If PILLBAN = 0, COUP = 1, and SM10 = 1, then CI = 65

If the shareholders cannot act by written consent but less than 10% of shareholders can call a special meeting of shareholders, and at the meeting shareholders can mount a “coup,” then the index is 65. If shareholders call a special meeting, the firm is generally required to hold such a meeting within 10-60 days (the minimum period specified in the notice of meeting under all corporate codes). The index represents the maximum 60 day delay before the meeting and 5 days for preparation and proper demand of the meeting. No additional time is added for processing under the federal proxy rules because such processing periods are assumed to run concurrently with the 60-day notice period under state law.

Case 4 If PILLBAN = 0, COUP = 1, SM10 = 0, and SM50 = 1, then CI = 90

If the shareholders cannot act by written consent, and 10-50% of shareholders can call a special meeting, and at the meeting shareholders can mount a “coup,” the index is 90, which reflects the minimum time practically necessary for shareholders to (a) spend 20-30 days to solicit consents/demands to call the special meeting (which will require a prior filing with the SEC, as with written consent solicitations) and (b) 60 days for the company to hold the meeting (during which time the shareholder may solicit proxies to act at the special meeting).²⁷⁷

277. If a supermajority of shareholders can call a special meeting, then the index will be presumed to reflect a practical inability of shareholders to do so, given the difficulty of obtaining supermajority votes for a preliminary step in a takeover bid. Unusual circumstances might indicate that such a supermajority might be forthcoming—for example, where a bidder is making a large premium offer and the target directors are attempting to “just say no” to the bid, or where a supermajority of shareholders have tendered into an offer already. In those cases, the index might be more appropriately set at ninety. In any event, with the foregoing analysis complete, terms defined, and algorithm programmed into a spreadsheet, the index can be recalculated readily to examine relative legal takeover vulnerability making different assumptions about the size of the shareholder coalition mobilized against the target.

Case 5 If $PILLBAN = 0$, $EARLY = 0$ and ($CLASS = (0 \text{ or } 2)$ or $COUP = 1$) then $CI = (ANNUAL * 0.5) + 23$

If shareholders cannot act "early," and the board is not staggered, or (regardless of whether the board is staggered) shareholders are able to mount a "coup" at a shareholder meeting, then the index will depend on how long shareholders must wait until the next annual meeting.²⁷⁸ For practical analysis of a given company's vulnerability to takeover at any given moment in time, of course, the appropriate measure would be to simply add onto the date of the last annual meeting the value of and subtract the current date from the sum. At a given point in calendar time, in other words, a given firm's legal vulnerability to takeover depends on how long it has been since the last annual meeting and how much flexibility the target board has under state law to delay the next annual meeting.²⁷⁹

Starting approximately forty-five days prior to each annual meeting,²⁸⁰ the firm's index rises suddenly to the maximum of 390, and then declines during the year until a date approximately 345 days after the last annual meeting. At this point, any bidder wanting to use the upcoming annual meeting to coordinate shareholders against existing directors must commence its proxy statement filing and preclearance process with the SEC to leave sufficient time to solicit and obtain a majority of proxies. The precise cut-off point will vary depending on target shareholder dispersion, the number of target shareholders willing to support a bid, and the degree of target resistance, all of which can affect the time needed for a proxy fight. Nevertheless, at some point around forty-five days prior to the scheduled annual meeting, the index again rises discontinuously to its maximum, reflecting the fact that the bidder has lost its chance, for the next year, to begin an effective proxy fight. As a result of this fluctuation, bidders sometimes wait until the point in the calendar year when the target is most vulnerable before commencing a bid, but often other factors (financial risk, potential competition, regulation) may prompt a bidder to commence without regard to where the target is in its annual meeting cycle.

For purposes of research or analysis of a large number of firms at varying points in annual meeting cycles, a precise calculation of each

278. Massachusetts switches the normal default rule on classified boards, so for Massachusetts firms only, the algorithm for Case 5 is: If $PILLBAN = 0$, $EARLY = 0$ and ($CLASS = 0$ or $COUP = 1$) then $CI = (ANNUAL * 0.5) + 23$.

279. DEL. CODE ANN. tit. 8, § 211(c) (1991 & Supp. 1998). Delaware law also requires an annual meeting within thirty days of the date designated for the annual meeting in the bylaws. *Id.* However, most companies allow boards to amend bylaws, making this requirement non-binding in many circumstances.

280. In an actual takeover fight, the target could hold its annual meeting at any point prior to the maximum of 390 days after the last annual meeting, so that the cutoff for commencement of a proxy fight may be earlier. Firms must generally provide advance notice of the scheduling of an annual meeting in order to prevent them from lulling bidders into inaction and then scheduling an annual meeting sufficiently close in time so as, in effect, to push past the cut-off point for an effective proxy fight.

firm's index is neither feasible nor necessary. Instead, an average index can be calculated, equal to the expected time to the next annual meeting from a (random) point in the annual meeting cycle that shareholders decide to wage a proxy fight or a bidder decides to launch a hostile bid. As reflected in the formula given above, the index equals the forty-five-day minimum for proxy preclearance plus 50% of the time before shareholders can judicially compel another annual meeting (less forty-five), or

$$(\text{ANNUAL} - 45) * 0.5 + 45$$

which after rounding simplifies to

$$\text{ANNUAL} * 0.5 + 23$$

Advance notice periods frequently required by bylaws will not generally add any additional time to a proxy fight, because they can run concurrently with SEC preclearance.

Case 6 If $\text{PILLBAN} = 0$, $\text{COUP} = 0$, $\text{CLASS} = 1$, and either ($\text{STGLOC} = 1$ or $\text{WORKAROUND} = 0$), and either ($\text{CUMUL} = 0$ or $\text{INSIDE} < \text{HOLD}$), then $\text{CI} = (\text{ANNUAL} * 1.5) + .23$

If shareholders cannot mount a "coup," and the board is staggered (either in the charter or, if shareholders cannot workaroud the bylaws, in the bylaws), then shareholders will have to fight through at least two annual meetings, which means waiting at least one full annual meeting cycle, plus an expected average time of 50% until the first annual meeting. If shareholders may not cumulate their votes, then only 1.5 annual meeting cycles will be necessary on average. (The ability of shareholders to act "early" is irrelevant to control fights unless they can also mount a "coup.") Even if shareholders may cumulate votes, but insiders own less than the minimum percentage of outstanding voting shares necessary to hold onto a seat with cumulative voting, then, again, only 1.5 annual meeting cycles will be necessary on average.²⁸¹

In each case, the index is equal to forty-five days' minimum SEC preclearance for the next annual meeting (as discussed for Case 5), plus 50% of the time to the next annual meeting less forty-five days for SEC preclearance already included (again as discussed for Case 5), plus 100% of the time to the number of annual meetings needed to obtain a majority of the board, given by multiplying the time between annual meetings by 1.5, and adding 23.²⁸²

281. For Massachusetts firms only, the algorithm for Case 6 is: If $\text{PILLBAN} = 0$, $\text{COUP} = 0$, $\text{CLASS} = (1 \text{ or } 2)$ and either ($\text{CUMUL} = 0$ or $\text{INSIDE} < \text{HOLD}$), then $\text{CI} = (\text{ANNUAL} * 1.5) + 23$.

282. This analysis assumes a staggered board has three classes, as with nearly all staggered boards. The law of most states (including Delaware and those that follow the RMBCA), as well rules of the

As with Case 5, analysis of a particular company at a given point in time would not use the average expected time to the next annual meeting, but would calculate an actual time, resulting in an index that fluctuates over the annual meeting cycle, but shifted upward by the total time between annual meetings.

Case 7 If $PILLBAN = 0$, $COUP = 0$, $CLASS = 1$, $CUMUL = 1$ and
 $INSIDE \geq HOLD$, then $CI = (ANNUAL * 2.5) + .23$

If shareholders cannot act "early," a "coup" cannot be mounted, the board is staggered, shareholders may cumulate their votes, and directors and officers own more than the minimum percentage of outstanding voting shares necessary to hold onto a seat with cumulative voting, then insiders will be able to hold onto a majority of board seats through two elections rather than just one, increasing the index to equal the time between annual meetings multiplied by 2.5, plus 23.²⁸³ This analysis assumes that directors and officers are assumed to vote as a "block" against the dissident coalition or bidder; this assumption may not be valid in all cases, but is a reasonable simplification for research.

III

HOW THE INDEX WORKS: FOUR EXAMPLES

To briefly illustrate how the contestability index would be determined for real companies, consider the following public companies: CompUSA, Inc., Dell Computer Corp., Exxon Corp., and Alteon, Inc. CompUSA and Dell are well-known, Texas-based computer retailers; Exxon is of course one of the largest companies in the world; and Alteon is a small-cap health-care company. None has a shareholder with more than 20% of the voting stock; none has a dual-class capitalizations. Thus, each is subject to a hostile takeover bid (although a bid for Exxon might be impossible to finance). Exxon is the direct corporate descendant of Standard Oil of New Jersey, founded in 1882, and is still incorporated in New Jersey, although it moved its headquarters from New York to Texas in 1990. CompUSA, Dell and Alteon were founded in the 1980s and are all incorporated in Delaware. Dell went public in 1988, CompUSA and Alteon in 1991.

New York Stock Exchange, *see* New York Stock Exchange Listed Company Manual § A-15, at A-280, limit the number of classes to three. Two classes are sometimes seen, and four are permitted in New York and North Carolina. In the two-class case the index equals $1.25 * ANNUAL + 23$, as delay consists of one normal annual meeting cycle, weighted at 50%, as in Case 5. Evenly divided classes are equivalent to three classes (bidders will assume deadlock may not provide control). If classes are lopsided, with one more seat in one class than the other, the odds the larger class will be elected at the next meeting are 50/50. If the odds of an even or lopsided split are also 50/50, the probability a majority will not be elected at the next annual meeting is 75%, resulting in a total expected time to majority control of $(0.5 + 0.75) * ANNUAL + 23$.

283. For Massachusetts firms only, the algorithm for Case 7 is: If $PILLBAN = 0$, $COUP = 0$, $CLASS = (1 \text{ or } 2)$, $CUMUL = 1$ and $INSIDE > HOLD$, then $CI = (ANNUAL * 2.5) + 23$.

For all four firms, calculation of the contestability index is simplified because all have blank check authority in their charters and sufficient authorized and unissued preferred stock, so that none bans pills, and each firm will be able to adopt a pill in response to a bid (if it has not previously done so). For Exxon and Dell, the calculation is also simplified because neither has a staggered board, rendering cumulative voting and inside ownership irrelevant for purposes of the index. Both Alteon and CompUSA have staggered boards, but only CompUSA's is effective, because at Alteon shareholders can both mount a "coup" and act "early," in advance of an annual shareholders' meeting. An "early coup" is also possible at Dell. At Exxon, a "coup" is possible, but shareholders must wait until the next annual shareholders' meeting, making a "coup" irrelevant; and at CompUSA shareholders can neither mount a coup nor act early.

Based on this analysis, the indices for Exxon, Dell, Alteon, and CompUSA can be determined from Algorithm Cases 2, 4 and 5, and equal 208, 45, 45, and 608, respectively. Thus, a bidder can expect to bring a takeover bid for either Dell or Alteon to a closing within forty-five days, absent antitrust concerns, bid competition, or some effective transactional or litigation defense, whereas at Exxon it will take between two and fourteen months, and at CompUSA, it will take a minimum of thirteen months, and could take over two years. As asserted at the outset, the legal takeover vulnerability of the three firms varies significantly, based on each firm's set of takeover defenses and governance terms.

IV

CONTESTABILITY INDICES UNDER DEFAULT LAW

Another way to illustrate the way the index works is to consider what indices would apply to firms that do not vary from default governance rules supplied by state law. Interestingly, the result of a strict default law analysis is uninteresting: all states provide that the board's authority to issue or set the terms of common or preferred stock extends only so far as expressly provided in the charter; thus, all firms begin life with a ban on pills implicitly in place. All firms, however, grant boards at least some flexibility to issue stock, for obvious financing reasons, and nearly all grant boards sufficient flexibility in this authority that an implicit ban on pills is absent.

If a ban on pills, then, is assumed to not be part of default law, the analysis of the contestability index under default law becomes only slightly more interesting. Variations remain remarkably minor: indices range only from forty-five to ninety, nowhere near the range found in any random sample of public companies.

Perhaps surprisingly to legal academics who think of Delaware as captured by management (antitakeover) interests, Delaware imposes the lowest amount of delay on takeovers as a matter of default law. California and RMBCA states impose only slightly more delay: they effectively prohibit shareholder action by written consent but allow special meetings to be called by 10% of the shareholders. Pennsylvania only partially lives up to

its reputation as being the state most inhospitable to takeovers: it bars shareholder action by written consent and requires 20% of shareholders to call a special meeting, thus imposing the highest hurdle of any state's default law to "early" action by shareholders, but the delay expected even under Pennsylvania default law for a takeover bid is still only a modest ninety days. Massachusetts, on the other hand, imposes no more delay than does the RMBCA, despite its infamous imposition of staggered boards as a matter of default law during the Norton takeover battle, and despite its being one of the few states to not give shareholders the ability to remove directors as a default matter: the ability of shareholders to pack the board under default law defeats the effectiveness of the staggered board provision anyway.

ANNEX B-1

DEFINITION OF COUP FOR DELAWARE FIRMS

(1)(a)(i) If CLASS = 1 and (STGLOC = 1 or WORKAROUND = 0)

and [REM = (0 or 2) or REMLOC = 2], and

(1)(b)(i) VAC = 0 and [VACLOC = 1 or (VACLOC = 2 and WORKAROUND = 0)], or

(1)(b)(ii) NUMSET = 0 and NUMLOC = 1, or

(1)(b)(iii) (NUMSET = 2 or NUMLOC = 2) and WORKAROUND = 0, then COUP = 0

(2) Else COUP = 1

Explanation

Delaware default law on removal of directors without cause depends on whether the board is classified: if it is, removal is prohibited unless the charter expressly permits it; if it is not classified, removal is permitted, and neither charter nor bylaws may prohibit it. To be effective, a staggered board must be specified in the charter, or, if in the bylaws, the shareholders must not be able to amend by the bylaws without a supermajority vote. Thus, at Delaware firms without classified boards, coups are mandatory. At Delaware firms with classified boards, coups are still possible if the board may be packed, or if the charter permits removal without cause. Default law permits directors to fill vacancies, but does not shareholders to set the number of directors unless so specified in the bylaws. Thus, to prevent board packing: (i) vacancy filling must be prohibited in the charter or bylaws, and if the latter, the bylaws must require a supermajority vote to be amended; (ii) the charter may prohibit shareholders from setting the number of directors; or (iii) the bylaws may prohibit or be silent on shareholders' ability to change the number of directors, if the bylaws may not be changed without a supermajority vote.

RMBCA (MODEL NON-DELAWARE) DEFINITION OF COUP

- (1)(a) If REM = 0 and REMLOC = 1, and
- (1)(b)(i) VAC = 0 and VACLOC = 1, or
- (1)(b)(ii) NUMSET = 0 and NUMLOC = 1, or
- (1)(b)(iii) (NUMSET = 2 or NUMLOC = 2) and WORKAROUND = 0, or
- (1)(b)(iv) STATE = MA, VAC = (0 or 2), and WORKAROUND = 0)], then COUP = 0
- (2) Else COUP = 1

Explanation

Default law in most states permits shareholders to remove directors without cause unless otherwise provided in the charter. Thus, the first part of the definition—labeled (1)(a) above—specifies that a coup is not possible only if removal is barred and the bar is in the charter. In addition, for a coup to not be possible, shareholders must not be able to pack the board. Board packing has two steps: changing the number of directors and filling the resulting vacancies. Most states allow shareholders to fill vacancies unless otherwise provided in the charter; thus, case (1)(b)(i) above requires the charter to specifically bar shareholders from filling vacancies. Alternatively, board packing may be blocked if (ii) shareholders are expressly barred from changing the number of directors in the charter or (iii) the bylaws are silent or prohibit directors from changing the number of directors, and need a supermajority vote to amend the bylaws. A special case is added for Massachusetts, which uniquely requires shareholders to be granted the power to fill vacancies either in the charter or bylaws. This standard definition of COUP does not apply to firms in Delaware, Maine, Montana, Nevada, New Jersey, New York, Ohio, or Texas, which also have unusual provisions regarding removal.

DEFINITION OF COUP FOR OHIO FIRMS

- | | | |
|--------|---|----------|
| (1) If | REM = 0 and (REMLOC = 1 or WORKAROUND = 0) then | COUP = 0 |
| (2) | Else | COUP = 1 |

Explanation

Ohio does not permit shareholders to fill vacancies; thus, a coup is not possible via packing the board. Shareholders may remove directors without cause (even if the firm's board is staggered) unless the charter or bylaws provide Else. Thus, unless either the charter expressly provides shareholders may not remove directors, or the bylaws provide shareholders may not remove directors and may not be amended without a supermajority vote, a coup is possible.

DEFINITION OF COUP FOR MAINE, MONTANA, NEVADA AND NEW JERSEY FIRMS

- | | | |
|-------------|--|----------|
| (1)(a) If | [REM = (0 or 2) or REMLOC = 2] and | |
| (1)(b)(i) | VAC = 0 and VACLOC = 1, or | |
| (1)(b)(ii) | NUMSET = 2 or (NUMSET = 0 and NUMLOC = 2)] and WORKAROUND = 0, | |
| | or | |
| (1)(b)(iii) | (NUMSET = 0 and NUMLOC = 1) | |
| then | | COUP = 0 |
| (2) | Else | COUP = 1 |

Explanation

New Jersey does not permit removal of directors without cause unless it is expressly provided for in the charter; Maine, Montana and Nevada require a two-thirds vote for shareholders to remove directors without cause. Unless the charter changes these rules and permits removal without cause by a shareholder majority, the only way for shareholders to mount a coup is by packing the board. There are three different reasons packing the board may be impossible: (i) the shareholders may not fill vacancies by express provision of the charter; (ii) the charter and bylaws are silent on whether or not shareholders may fix the number of directors, or the bylaws prohibit

shareholders from changing the number of directors, and shareholders may only amend the bylaws with a supermajority vote; and (iii) the charter prohibits shareholders from setting the number of directors.

DEFINITION OF COUP FOR NEW YORK FIRMS

- | | | |
|-------------|---|----------|
| (1)(a)(i) | If REM = 0 and REMLOC = 1, or | |
| (1)(a)(ii) | REM = 0 and REMLOC = 2 and WORKAROUND = 0, or | |
| (1)(a)(iii) | REM = 2 and WORKAROUND = 0, and | |
| (1)(b)(i) | VAC = 0 and VACLOC = 1, or | |
| (1)(b)(ii) | NUMSET = 0 and NUMLOC = 1, or | |
| (1)(b)(iii) | NUMSET = 0 and NUMLOC = 2] and WORKAROUND = 0, or | |
| (1)(b)(iv) | NUMSET = 2 and WORKAROUND = 0, then | COUP = 0 |
| (2) | Else | COUP = 1 |

Explanation

New York does not allow shareholders to remove directors as a default matter, so the ability to remove directors may not be available in three situations: first, where the charter expressly prohibits it (case (1)(a)(i)); second, where the bylaws prohibit it and may not be amended without a supermajority vote it (case (1)(a)(ii)); and third, where the charter and bylaws are silent, and the shareholders cannot amend by the bylaws to add the power to remove directors without a supermajority vote it (case (1)(a)(iii)). In addition, as with the standard definition of COUP, shareholders must also be prevented from packing the board, which can be done in one of four ways.

DEFINITION OF COUP FOR TEXAS FIRMS

- (1)(a)(i) If $CLASS = 1$ and $(STGLOC = 1 \text{ or } WORKAROUND = 0)$
and $[REM = (0 \text{ or } 2) \text{ or } REMLOC = 2]$, or
- (1)(a)(ii) $CLASS = 0$ and $REM = (0 \text{ or } 2)$ and $WORKAROUND = 0$, and
- (1)(b)(i) $VAC = 0$ and $[VACLOC = 1 \text{ or } (VACLOC = 2 \text{ and } WORKAROUND = 0)]$, or
- (1)(b)(ii) $NUMSET = 0$, or
- (1)(b)(iii) $(NUMSET = 2 \text{ or } NUMLOC = 2)$ and $WORKAROUND = 0$, then $COUP = 0$
- (2) Else $COUP = 1$

Explanation

Texas follows Delaware law on removal, but expressly requires shareholders be given the ability to remove directors in the charter or by-laws, even in firms without classified boards. But such a power may be added by shareholders unless a supermajority vote is required for shareholders to amend the by laws.

APPENDIX C
VARIABLE DEFINITIONS

AGECO is the age of an issuer's business (that is, the year of the IPO less the oldest year given by the issuer as the date of its founding or organization in either its IPO prospectus or latest annual report on Form 10-K).

AGECSQ is AGECO squared.

AGEFIRM is the age of an issuer's legal entity (that is, the year of the IPO less the year of the latest of the issuer's incorporation or most recent reincorporation given by the issuer as the date of its founding or organization in either its IPO prospectus or latest annual report on Form 10-K).

AGEFSQ is AGEFIRM squared.

BUST is a dummy set to one if the issuer had been delisted as a result of bankruptcy between the IPO and the end of 1999, as reported by COMPUSTAT and confirmed by searches in Lexis and other news sources.

CAHQ is a dummy set to one if the issuer's principal place of business at the IPO is in California, given by the IPO prospectus.

CAINC is a dummy set to one if the issuer is a California corporation at the IPO, given by the issuer's charter at the IPO and confirmed in the IPO prospectus.

CAP5ASST is the ratio of the issuer's average annual capital expenditures in the five years after the IPO to book value of the issuer's assets at the IPO, from COMPUSTAT.

CEOAGE is the age of the CEO at the IPO, given by the IPO prospectus.

CEOTEN is the number of years the CEO has worked at the issuer, given by the IPO prospectus.

CEOFOUND is a dummy set to one if the CEO at the IPO founded the issuer. FCF5 is the average annual free cash flow over the five years after the IPO.

CEOPRE is the percentage voting power held immediately before the IPO by the person who is chief executive officer at the time of the IPO (CEO),

given by the IPO prospectus. Where an issuer does not have a dual class capital structure, this is also be the percentage equity owned by the CEO before the IPO.

CEOPOST is the percentage voting power held by the CEO immediately after the IPO, given by the IPO prospectus.

CEOSOLD is a dummy set to one if the CEO reduced her voting power in the IPO, determined from the IPO prospectus.

CLASS as dependent dummy variable, set to one if the issuer had a classified board.

CM2 is the Carter-Manaster rating, given by Carter et al., *supra* note 98, for the lead underwriter in the IPO, given by the IPO prospectus.

DEBTASST is the ratio of book value of the issuer's long-term debt to book value of assets at the IPO.

DEFENSE as dependent dummy variable, ranking an issuer's legal takeover vulnerability, most to least, by their takeover defenses, given by reference to default law of an issuer's state of incorporation and the issuer's charter and bylaws and IPO prospectus, as follows:

- Rank 1: Issuers that permit shareholders to "act early," either by written consent of a majority of shareholders in lieu of a meeting, or by permitting a majority or less of shareholders to call a special meeting of shareholders.
- Rank 2: Issuers that do not permit shareholders to "act early," and do not have classified boards.
- Rank 3: Issuers that do not permit shareholders to "act early" and have a classified board.
- Rank 4: Issuers that have a dual class capital structure and sell low-vote stock in the IPO.

Note: For reasons discussed in Appendix B, this ranking is an imperfect index of an issuer's legal takeover vulnerability, but it is (a) simpler to determine from public information than a firm's contestability index, (b) a better approximation of a firm's legal takeover vulnerability than merely using single defense terms, such as board classifi-

cation or dual class structure, in isolation, and (c) requires fewer degrees of freedom with little loss of theoretical power than loading all relevant defenses into a term-by-term unordered multinomial logit (when defenses are the regressand) or as separate independent variables (when defenses are the regressor). It is also similar to a ranking used by Daines & Klausner, *supra* note 8.

DEINC is a dummy set to one if the issuer is a Delaware corporation at the IPO, given by the issuer's charter at the IPO and confirmed in the IPO prospectus.

DEVEL is a dummy variable set to one if the IPO prospectus discloses the issuer was in the development stage (that is, had not yet begun shipping product or providing services) at the time of the IPO.

DOPRE is the percentage voting power held by directors and officers ("D&O") immediately before the IPO, given by the IPO prospectus.

DOPOST is the voting power held by D&O immediately after the IPO, given by the IPO prospectus.

DUALCLAS is a dummy set to one if the issuer had a dual class capital structure at the time of the IPO, given by the charter and confirmed in the IPO prospectus.

DUALCON is a dummy set to one if the issuer had a dual class capital structure and sold low-vote stock in the IPO. See Field, *supra* note 8, for reasons this variable may differ from DUALCLAS.

EARN1 is the issuer's net income in the first fiscal year ended after the IPO, from COMPUSTAT

EARNPOS is a dummy set to one if an issuer had positive earnings in the last period reported in the IPO prospectus.

FAMILY is a dummy set to one if the issuer was majority owned by an individual or a family of related individuals prior to the IPO.

FCF5 is an issuer's average annual operating income before income taxes, depreciation and amortization charges ("OBITDA") over the five fiscal years after the IPO, from COMPUSTAT.

FCF5POS is an issuer's average annual OBITDA, if positive, over the five fiscal years after the IPO, from COMPUSTAT.

IDOPRE is the percentage voting power held by independent D&O immediately before the IPO, given by the IPO prospectus. "Independent" means not an officer.

IDOPOST is the percentage voting power held by independent D&O immediately after the IPO, given by the IPO prospectus.

LAW1 is the number of lawyers at the office working on the IPO of the law firm serving as issuer's counsel in the year of the IPO, as reported by Martindale-Hubbell, Inc.

LAWFRM1 is the total number of lawyers in the law firm serving as issuer's counsel in the year of the IPO, as reported by Martindale-Hubbell, Inc.

LAWFRMSQ is LAWFRM1 squared.

LBO is a dummy set to one if the issuer is owned in part by a leveraged buyout ("LBO") fund prior to the IPO, as indicated in year-end surveys in *Buyouts* (an industry publication) and confirmed by the IPO prospectus. The variable was set to one when it was clear from the prospectus that an IPO was backed by a LBO fund or had recently undergone an LBO even though it was omitted from the year-end surveys.

LNASSET0 is the natural log of the book value of the issuer's assets at the end of the last period reported in the IPO prospectus.

LNOFFSZ is natural log of the IPO offer size, and LNASSET0 is the natural log of the book value of the issuer's assets at the end of the last period reported in the IPO prospectus.

MA is a dummy set to one if the issuer had been delisted as a result of being acquired or had engaged in a "merger of equals" (that is, a merger in which the counterparty had assets with a book value of at least 20% of the sample issuer) between the IPO and the end of 1999, as reported by COMPUSTAT and confirmed by searches in Lexis and other news sources.

MAINDACT is a count from SDC data of merger or acquisition transactions over \$10 million in the period 1988-90 that involved targets with the

issuer's three-digit SIC code, given by the IPO prospectus. Only majority acquisitions of publicly held targets without control shareholders were included.

MASDC is a count from SDC data of merger or acquisition transactions over \$10 million in the period 1988-90 that involved the IPO issuer counsel as counsel to one of the principal parties. Only majority acquisitions of publicly held targets without control shareholders were included.

NAME is a dummy set to one if the issuer's corporate name includes or consists of the name of a pre-IPO majority shareholder, given by the IPO prospectus.

PPEASST is the ratio of the issuer's book value of net property, plant and equipment ("PPE") to the book value of its total assets as of the most recent date reported in the IPO prospectus.

PPENET is the book value of the issuer's PPE as of the most recent date reported in the IPO prospectus.

PBIND is a dummy set to one if the issuer's primary three-digit SIC code, given by the IPO prospectus, is one in which a large number of issuers were reported to have dual class capital structures in Field, *supra* note 8. An alternative specification, PBINDB, was set to one if the issuer's primary three-digit SIC code is one in which a large number of issuers were reported to have dual class capital structures in the sample studied in this article.

RMBCA is a dummy set to one if the issuer is incorporated at the IPO in a state that follows the Revised Model Business Corporation Act's provisions governing special meetings, action by written consent, removal of directors by shareholders, determination of the number of board seats, filling of board vacancies, and board classification. State of incorporation is determined from the issuer's charter and confirmed in the IPO prospectus; whether a state follows the RMBCA is determined by the Revised Model Business Corporation Act Annotated.

RD5ASST is the ratio of the issuer's average annual research and development expenses in the five years after the IPO to book value of the issuer's assets at the IPO, each given by COMPUSTAT.

RETAIN is the percentage of voting power retained by pre-IPO shareholders after the IPO, given by the IPO prospectus.

ROE is average annual return on equity over the five full fiscal years after the IPO, from COMPUSTAT.

ROA is average annual return on assets over the five full fiscal years after the IPO, from COMPUSTAT.

SHH1 is the number of issuer's shareholders at the end of the first fiscal year after the IPO, from COMPUSTAT.

SILVAL is a dummy set to one if the office representing a given IPO issuer is in located in Silicon Valley (that is, Palo Alto, California).

SPLIT is a dummy set to one if the a public company is both the largest shareholder of the issuer and the public company owned more than 20% of the issuer prior to the IPO, as indicated by the IPO prospectus.

SUITSALL is a count of decisions by all Federal and state courts reported in Lexis in lawsuits 1980-89 in which the law firm acting as issuer counsel was mentioned and in which one of the following was mentioned: "merger," "acquisition," "proxy fight," or "tender offer."

SUITSDEL is a count of decisions by Delaware courts reported in Lexis in lawsuits 1980-89 in which the law firm acting as issuer counsel was mentioned and in which one of the following was mentioned: "merger," "acquisition," "proxy fight," or "tender offer."

UNIT is a dummy set to one if the IPO was a unit offering of stock and warrants, as indicated by the IPO prospectus.

VC is a dummy set to one if the issuer is owned in part by a venture capital ("VC") fund prior to the IPO, as indicated in year-end surveys in *Going Public: The IPO Reporter* (an industry publication) and confirmed by the IPO prospectus. The variable was set to one when it was clear from the prospectus that an IPO was backed by a VC fund even though it was omitted from the year-end surveys.

